

Reader's digest



THE BIG ONE

THIS MEGAQUAKE
IS OVERDUE

PAGE 102

**The Healing
Power of Hens**

PAGE 28

**10 Sleep Myths
Debunked**

PAGE 15

**Child Labour
Tobacco's Shame**

PAGE 54

Smart Animals	8
All in a Day's Work	96
Word Power	125

Reader's digest



Explore, Interact, Inspire

Available now, everywhere





Contents

MARCH 2016

- Society**
- 28 THE COMPANY OF HENS**
They're friendly, cuddly and love having a good cackle. Raising chickens is changing the lives of lonely seniors. DAVID THOMAS
- Who Knew?**
- 38 IN PRAISE OF TECHNOLOGY**
The low-tech past was boring, says a father who's happily embracing his smartphone.
ANDREW O'HAGAN FROM THE *NEW YORK TIMES*
- City Secrets**
- 42 STREET SMART**
It's the navigation test so difficult that it enlarges your brain; memorising over 25,000 streets and 100,000 landmarks to do the job.
ROFF SMITH FROM *NATIONAL GEOGRAPHIC*
- Personal Essay**
- 50 THE MUSIC IN ME**
Dancing – especially when you're trying to impress a new partner – is terrifying with two left feet and no confidence. LISA FIELDS
- Investigation**
- 54 CHILDREN OF THE FIELDS**
In the US, children as young as 12 can legally toil in tobacco fields, where they are exposed to harmful toxins. ROBERT ANDREW POWELL
- Psychology**
- 62 CHEWPHOBIA**
When the sounds of chomping, slurping or lip-smacking evoke extreme rage or panic.
CHARLES BETHEA FROM *NEW REPUBLIC*





Contents

MARCH 2016



P. | **68**

Words of Lasting Interest

68 **WHY I STUDY MEMORY**

A neuroscientist finds three little words to break through her father's dementia.

DR WENDY SUZUKI, TOLD AT THE MOTH

Instant Answers

72 **VOLCANOES**

The what and how of volcanoes – and where they're most likely to erupt. HAZEL FLYNN

Up Close

74 **THE MAN WHO SELLS EVERYTHING**

Starting as an online bookseller, Jeff Bezos expanded into food, furniture and fashion.

GIDEON ROSE FROM *FOREIGN AFFAIRS*

Drama in Real Life

82 **BOY IN THE STREAM**

Two hours after frantic rescuers pull a toddler's lifeless body from the water, only his family and a dedicated intensive care doctor still refuse to give up hope. DEREK BURNETT

First Person

88 **A LOVE STORY**

A loving couple finds the heart to say goodbye to each other on the tranquil shores of Italy's Lake Como. LORENZO CARCATERRA FROM

NATIONAL GEOGRAPHIC TRAVELER

The Stranger Who Changed My Life

98 **THE CURIOUS WORLD OF MRS REESE**

Trapped in a troubled home, a young girl glimpses the promise of a better future.

HEATHER SELLERS



P. | **88**



MARCH

**BONUS
READ**

**THE
BIG ONE**

A devastating earthquake
and tsunami will happen.
The only question is when.

KATHRYN SCHULZ
FROM THE NEW YORKER

P. | **102**

REGULARS

- 4 Letters
- 8 Smart Animals
- 10 Kindness of Strangers
- 12 My Story
- 61 Quotable Quotes
- 81 That's Outrageous
- 114 Unbelievable
- 122 Puzzles, Trivia & Word Power

HUMOUR

- 36 Laughter, the Best Medicine
- 66 Life's Like That
- 96 All in a Day's Work

CONTESTS

- 5 Caption and Letter Competition
- 6 Jokes and Stories

THE DIGEST

- 15 Health
- 20 Food
- 22 Technology
- 24 Travel
- 26 Pets
- 116 Movies & Books



SEE
PAGE
6

Letters

READERS' COMMENTS AND OPINIONS

Voice Mail Memories

I never knew my phone saved deleted voice mail until I read 'Seriously, Listen to Your Voice Mail' (January). I lost a dear friend this year. He loved to joke around and would often leave me voice mails. I thought most were gone forever. I retrieved three. They made me laugh and cry. **DANIEL SHEFFER**



Family Feuds

Your article 'When Siblings Stop Speaking' (November) struck a chord with me. We have had our own sad experience of this. Even when siblings are very close while they are growing up, their later experience of life can produce changes which can cause them to drift apart and sometimes even become hostile to each other.

One thing not mentioned in the article is the sad impact such a breakdown has upon the rest of the family. Cousins grow up not knowing one another, uncles and aunts have no connection with their nieces and

nephews. Parents, of course, have to cope with the pain of not seeing their children together at the same time. I'm pleased to say that in recent months, there has been a miraculous move towards reconciliation in our personal situation after many years. So sometimes there is hope.

P.C. (NAME SUPPLIED)

While it's true you can't choose your family, you can choose to surround

yourself with people who love and support you. You don't have to please everyone. Family members shouldn't get a free pass.

RACHEL KOZAK

LET US KNOW

If you are moved – or provoked – by any item in the magazine, share your thoughts. See page 6 for how to join the discussion.

Swapping Notes

Thank you, Reader's Digest, for another brilliant issue. I have just spent a lovely few hours reading the December magazine from cover to cover.

I particularly enjoyed 'Notes From My Father' about emails exchanged between a father and son. Although my own father passed away many years ago, I feel that contacting his twin brother via email may be a way of getting to know what Dad was like as a young man.

BREE STAFFORD

The Whole Package

I love your magazine. Each time I'm finished with an issue, I pass it on to friends or family to enjoy. I've learned a lot about medicine and health, and the small size is great – it's easy to carry in my handbag in case I find myself in a situation where I have time to read.

DOREEN I.

WIN A PILOT CAPLESS FOUNTAIN PEN

The best letter published each month will win a Pilot Capless fountain pen, valued at over \$200. The Capless is the perfect combination of luxury and ingenious technology, featuring a one-of-a-kind retractable fountain pen nib, durable metal body, beautiful rhodium accents, and an 14K gold nib. Congratulations to this month's winner, Bree Stafford.



PHOTOS: ISTOCK



Hard-headed

We asked you to think up a funny caption for this photo.

They say a pilot needs a cool head.

HUANG JIANQI

When life gives you watermelons, make a helmet.

SITI M. A. RAHMAN

Tom's dry scalp treatment didn't cost him a cent.

CHRIS ANG

And parents say kids come from the cabbage patch.

VELMA HALL

Congratulations to this month's winner, Huang Jianqi.



CAPTION CONTEST

Come up with the funniest caption for the above photo and you could win \$100. To enter, email rdaeditor@readersdigest.com or see details on page 6.

EDITORIAL Editorial Director Lynn Lewis
Managing Editor Louise Waterson Chief
Subeditor & Production Editor Donyale
Harrison Deputy Chief Subeditor Melanie Egan
Designer Luke Temby Digital Editor & Humour
Editor Greg Barton Subeditors Jenny Byrne,
David Levell Editorial Coordinator Victoria
Polzot Contributing Editors Kathy Buchanan,
Hazel Flynn; Helen Signy

PRODUCTION & MARKETING

Production Manager Balaji Parthasarathy
Marketing Manager Gala Mechkauskayte

ADVERTISING Group Advertising & Retail
Sales Director, Asia Pacific Sheron White
Advertising Sales Manager Darlene Delaney

REGIONAL ADVERTISING CONTACTS

Asia Kahchi Liew, liew.kahchi@rd.com
Australia Darlene Delaney,
darlene.delaney@rd.com
New Zealand Debbie Bishop,
debbie@hawkhurst.co.nz

PUBLISHED BY READER'S DIGEST (AUSTRALIA) PTY LTD

Managing Director/Publisher
Walter Beyleveldt
Director Lance Christie

READER'S DIGEST ASSOCIATION, INC (USA)

President and Chief Executive Officer
Bonnie Kintzer
Vice President, Chief Operating Officer,
International Brian Kennedy
Editor-in-Chief, International Magazines
Raimo Moysa

ALL RIGHTS RESERVED THROUGHOUT THE
WORLD. REPRODUCTION IN ANY MANNER
IN WHOLE OR PART IN ENGLISH OR OTHER
LANGUAGES PROHIBITED

CONTRIBUTE

FOR DIGITAL EXTRAS AND
SOCIAL MEDIA LINKS, SEE PAGE 7.

Anecdotes and jokes

Send in your real-life laugh for
Life's Like That or All in a Day's
Work. Got a joke? Send it in for
Laughter is the Best Medicine!

Smart Animals

Share antics of unique pets or
wildlife in up to 300 words.

Kindness of Strangers

Share your moments of
generosity in 100-500 words.

My Story

Do you have an inspiring or
life-changing tale to tell?
Submissions must be true,
unpublished, original and
800-1000 words - see website
for more information.

Letters to the editor, caption competition and other reader submissions

Online

Follow the "Contribute" link at the
RD website in your region, or via:

Email

AU: editor@readersdigest.com.au

NZ: editor@readersdigest.co.nz

Asia: rdaeditor@readersdigest.com

We may edit submissions and use them
in all media. See website for full terms
and conditions.

TO SERVE YOU BETTER - OUR PRIVACY STATEMENT

Reader's Digest collects your information to provide
our products and services and may also use your
information for the marketing purposes of RD and/
or selected corporate partners. If the information is
not provided you will be unable to access our
products or services. Our Privacy Policy at the
Reader's Digest website in your region contains full
details on how your information is used (including
how we may share your information with our affiliate
companies in the US or other overseas entities), how
you may access or correct information held and our
privacy complaints process.

JOIN THE CONVERSATION

Four great reasons why you should join us online...

We give away cash and prizes

Join fun competitions and quizzes



First look at future issues

Get a sneak peek at upcoming stories and covers



We give great advice

Get regular home, health and food tips from The Digest



We must teach our children to dream with their eyes open.

HARRY EDWARDS



We help you get motivated

#QuotableQuotes and #PointstoPonder to get you through the day



Smart Animals

Wonderful stories of behaviour that seems so human



A Clutch in a Hutch EMILY DEE

One night we went outside to make sure the animals were all fine. The ducks and chickens were OK. I went to check on the baby rabbits and I saw their mother in the outside run, nibbling on some cabbage.

I shone my torch in the hutch where the babies were sleeping. There, sitting on top of them like a big, proud, fluffy hen was our rooster, Mr Ancona. He had his wings spread carefully over the rabbits, keeping them warm.

The funny thing about it is that he is a rooster and, even if he thought he was a hen, they were still rabbits!

Special Delivery

LINDA BUHSE

Many years ago we had a lovely cat named Minx, who was pregnant when she came into our lives. She'd been a stray in the warehouse where I worked and was different from other

cats we owned. Minx was happy as long as we were around – she'd even go sailing with us. If she accidentally scratched us when playing, she would lick us as if to apologise.

There was an old stray cat in our neighbourhood and Minx always

ILLUSTRATED BY EDWINA KEENE

left some of her dinner for him. Her best friend was a cocker spaniel, and she would wait for the dog each day outside our front gate. When the owner walked the dog, he would wait while they rolled around, played a bit and groomed each other. At night, she was always happy to wait for her dinner as long as we gave her a pat and a cuddle.

As Minx's delivery due date drew closer she began looking for places to give birth. I cleaned out the bottom of my wardrobe, put some rags down and showed her the little bed I had made for her. After a short inspection, Minx purred, rubbed my leg and continued on her way. I thought there would be little chance of it being suitable but I always left the door ajar just in case.

One night soon afterwards, my husband and I had been out late and were chatting in the kitchen when she came in, meowed and trotted out again. We thought it strange, but kept talking. Once more she came in, meowed and left. After a third time, we realised she wanted us to follow her. She led us to my wardrobe where, with lots of loud purring, she presented two tiny new kittens. She brought the pair out of the wardrobe and placed them at our feet. She was a very good mum.



Sibling Rivalry

ANNIE SMART

It's interesting how you can get such different types of siblings among both animal and human families.

In 1994, two brother-and-sister Chihuahua/Maltese terrier crosses named Scamper and Feebee joined our family. The sister, Feebee, was the 'dumb blonde' and her brother Scamper was the 'smart cookie'. Feebee loved her bones but Scamper could take them or leave them. Even so, Scamper loved to outsmart Feebee and take her bone just for the fun of it. One day, however, I caught him out.

Feebee would always bark madly whenever someone walked past our house. This day, when they were two years old, Scamper suddenly ran to the front fence barking at no-one. Feebee jumped up from her spot in the backyard, leaving the bone she was enjoying, to join in with the barking. Scamper then ran back to Feebee's bone and took it!

He had no real interest in it, just the fun of stealing it. Although he seemed to always get the better of his big sister, they played together beautifully for the most part.

You could earn cash by telling us about the antics of unique pets or wildlife. Turn to page 6 for details on how to contribute.



Caught up in my fog
of dissatisfaction, it
took a total stranger to
teach me to be thankful
for my good life

A Change of Heart

Anne Tiernan lives in Tauranga, New Zealand, and has three children aged five, seven and nine. She is Irish and met her Kiwi husband when they worked together in Dublin. She loves the outdoors and travelling.

BY ANNE TIERNAN

IT WAS ONE OF THOSE DAYS, an ordinary October day in 2014. I woke up weary and all of the routines of life were chores, the people in it irritants. I wasn't feeling any sense of gratitude for my comfortable home or lovely family. I dropped my two older children at school with a sense of relief and reluctantly headed to the supermarket to buy groceries with my youngest.

I was feeling resentful at having to go in the first place (why do they have to eat?) and my son, just four years old at the time and responding to my mood, was being difficult. I raced around with the trolley, thoughtlessly tossing items in with no regard to cost, while trying to control my errant child whose behaviour had now descended into complete obnoxiousness. Yes, I was that mother, growling,

PHOTO: ISTOCK

cajoling, threatening, despairing at a small child. The kind of behaviour you see in others before you have children and think, *I will never be one of those people.*

We eventually made it to the checkout, and stood in the queue waiting our turn. After a short time, I noticed that someone had joined the line behind us. I turned around and saw an old man. He was stooped over and wore a dirty overcoat, tied around the middle with rope. His shoes were split and his trousers flapped around sockless ankles on this cold, wet day. In his hands he carried a small carton of long-life milk.

As I had a trolley full of groceries, I asked him if he'd like to go ahead of me. It wasn't an act of kindness on my part, rather an automatic reaction, ingrained in me since childhood from the times I went shopping with my mother. Perhaps I just did it out of a sense of obligation or guilt. Perhaps I just wanted him gone. After all, his presence made me uncomfortable, in the same way I feel uncomfortable and avert my eyes when passing a homeless person.

He looked shocked and uncertain. "No, I couldn't possibly, are you sure? How kind of you," he stuttered. Reluctantly, he went ahead, paid for his milk, and took his change.

Then, to my amazement, he turned to my little boy and gently pressed the change into his hand. I protested that it wasn't necessary but he was



insistent. And my son, who had up to this minute been a thorn in my side, smiled his most beautiful smile, looked at this stranger frankly, and without judgment or hesitation, bear-hugged him around his grubby legs. The man gave a sheepish, gummy smile, then shuffled off, turning again to say thank you and wave.

I wondered at his life and at his reaction. *Was he so rarely shown any humanity? Did he feel he needed to pay for being acknowledged?*

I felt shame at my earlier self-pity. This humble, kind stranger had made me resolve to be more thankful – and made my little angel skip out of the supermarket with joy.

I never saw the man again but I think about him often.

Share your story about a small act of kindness that made a huge impact. Turn to page 6 for details on how to contribute and earn cash.

My mother never lost her love of murder mysteries
by Ruth Rendell, even as her eyes dimmed

Reading Companion

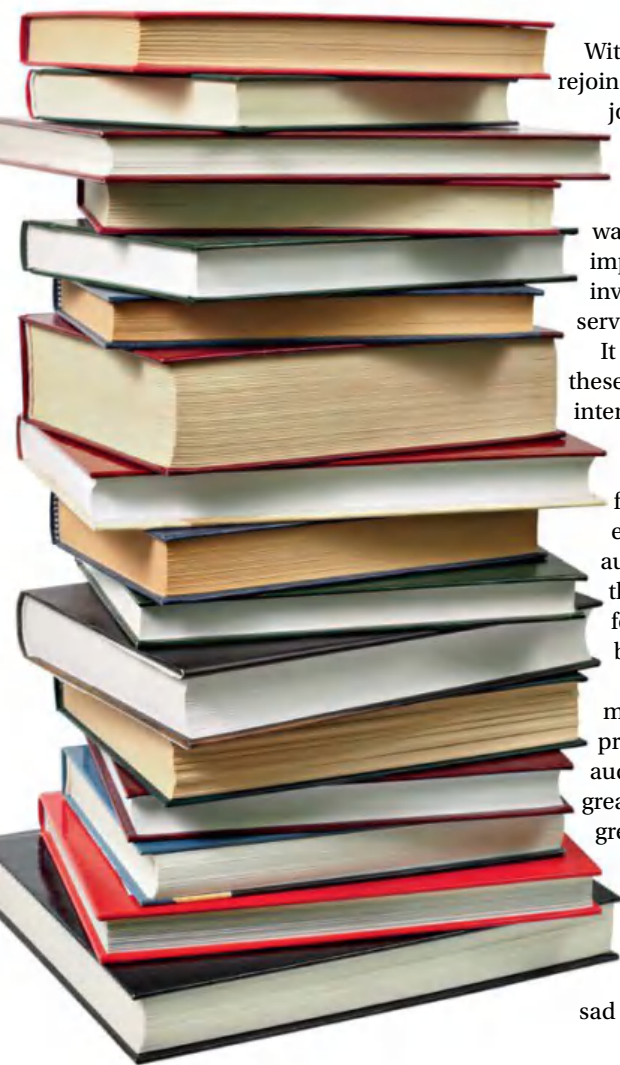
BY DIANE DAVIDSON

After working in public libraries for more than 30 years, Diane Davidson hopes to retire this year and dreams of writing a book. She loves to cook, which she does well, and garden, which she says she does badly.

IN THE 1950s, as the only child of a divorced mother, living in a modest two-roomed cottage on my aunt's property in rural Papakura, New Zealand, there was no TV and very little money to spend on entertainment, holidays and other treats. But we had our books and enjoyed nothing better than reading aloud to each other. My mother read me *The Faraway Tree* stories, *Alice's Adventures in Wonderland*, then, even better, *Through the Looking-Glass*. She read me *Treasure Island*, *Anne of Green Gables*, and poetry as well. When I turned seven, I was able to take my turn at the reading role, and we spent many pleasant evenings laughing over the antics of storybook characters.

In 1964, I was 18 and eager to 'fly the coop' so I left home to live in a flat with a school friend in Auckland. Caught up in a social whirl of parties, music and boyfriends, I had little time for reading. I married one of those boyfriends and we had two sons. My children loved visits to their doting grandmother. She and I regularly phoned each other and talked books together.

Mum loved to buy children's books for my sons and for the two daughters we later adopted. Every year they got a *Rupert Bear* annual or a beautifully illustrated book of fairy tales. Gradually, Mum's eyesight began to fail. She found it increasingly difficult to read the small print of her beloved books. She enjoyed looking at magazines but missed keeping up with the latest releases of her favourite authors.



With all my kids off to school, I rejoined the workforce and got the job I always wanted in our local library. I became a Special Needs library assistant and one of my tasks was to select books for visually impaired patrons. I was also involved in the home delivery service to house-bound members.

It was a great pleasure to visit these people and talk about their interests and their favourite authors – then return with large-print novels and non-fiction audiobooks. I also enjoyed suggesting new authors and finding subjects that might interest them. These folk were always so pleased to be able to access this material.

In time, I introduced my mother, first of all, to the large-print section, then eventually to audiobooks, which gave her a great deal of joy as her eyesight grew more dim.

In her 70s, Mum's choice of reading seemed to narrow down to mainly murder mystery stories and the occasional western. I was sad to see that she no longer

wanted to learn about the wonderful world she lived in. She had always shown a keen interest in what she called “faraway places with strange-sounding names”, the animal kingdom as well as current news and views.

While she said she no longer really cared so much about all that, I felt her reading experience would be enhanced if she had something more stimulating. As an experiment, I added some more ‘worthy’ titles in one of her weekly orders, slipping a four-disc audiobook on travel in the Andes between the new Ruth Rendell and a P.D. James. The next day as we drove to the supermarket, I asked, “How are you getting on with that latest book?”

She fixed me a knowing stare. “Oh, not so well,” she replied dryly. “But it might get better. You never know, they might get out their guns and shoot each other!”

I didn’t try to ‘improve’ my mother’s literary taste after that.

Ruth Rendell – especially when she wrote her psychological thrillers under the name Barbara Vine – was a great favourite that we shared. I would often read the text version while Mum listened to the recording so we could compare notes along the way. We admired the literary style of *The Bridesmaid*. It depicted an ethereal looking but criminal young woman who turned her limpid gaze on her besotted swain and casually suggested “We should do a murder”. When reading *King Solomon’s Carpet*, we

both knew that the boy Damon who train-surfed through the London Underground was in danger of coming to a sticky end. We agreed that Ruth Rendell didn’t seem to have a high opinion of her male characters. They were either knaves or fools. We thought she did ‘nasty’ very well.

A few years ago Mum suffered a massive stroke. I went with her in the ambulance to hospital, sat at her bedside for three days until she died, never having regained consciousness. My life-long friend, my reading companion, my dear mother was gone. Ruth Rendell continued to write books that appeared under both her names. I read *Portobello*, *The Child’s Child*, *The Girl Next Door* and finally *Dark Corners*. It was just so sad not to have the benefit of Mum’s enthusiastic opinion to compare notes with.

Then, last year, at age 85, Ruth Rendell passed away, too. It was reported that she, like my mother, had succumbed to a stroke. I’ll miss her regular new releases. For me and for my mother, Ruth Rendell was the Mistress of the Mystery.

There are still so many things I’d like to tell Mum. I’d like to thank her for her early guidance in the wonderful world of books. And I’m happy to say, that I’m also into audiobooks now.

Do you have a tale to tell?

We’ll pay cash for any original and unpublished story we print. See page 6 for details on how to contribute.

THE DIGEST

HEALTH

8 MYTHS ABOUT SLEEP

We debunk common untruths to help you get a good night's rest

MYTH You must sleep right through the night.

REALITY No-one sleeps all night long. Even people who feel they sleep well wake about 30 times a night – with these periods of arousal lasting no more than three minutes each and having no effect on the restorative action of sleep. Problems only begin when we are repeatedly aware of

being awake and find ourselves unable to get back to sleep.

MYTH You must get eight hours.

REALITY According to the Australian Sleep Health Foundation, most adults need on average between seven and nine hours a night, while some people's individual requirements fall a little outside this range.



8 MYTHS ABOUT SLEEP

MYTH The best sleep is before midnight.

REALITY Rather than the clock striking 12, we should look to our internal biological clock's idea of midnight. In other words, it's best to get some sleep before the point in the daily cycle where the body is running at its slowest pace. This 'biological midnight' occurs not at 12am, but somewhere between 3am and 4am. The average sleeper will have been asleep for 4-5 hours before reaching this point. This ensures that a greater proportion of the night's deep-sleep phases – where our recovery processes are especially effective – occur before this low point.

MYTH Older people need significantly less sleep.

REALITY Large normative sleep studies show that older people average around seven hours' sleep per night. From the age of 30 onwards, we wake up more often due to biological and hormonal changes as we age.

MYTH The bedroom should be cold.

REALITY To ensure a good night's sleep, keep your bedroom at around 18°C. However, choose appropriate covers or use a hot water bottle as being too cold can prevent you from getting a good night's sleep. That doesn't mean you should shut the windows tight, though, as stale air with lower levels of oxygen will tend to impair the restorative effect of sleep.

MYTH A full moon disturbs sleep.

REALITY A surprising number of people believe that a full moon has an effect on their sleep. However, data gathered by sleep scientists shows that this is simply not the case.

MYTH Exercise in the evening helps you sleep.

REALITY This myth originates in the fact that being physically tired does indeed help you sleep. Yet exercise serves to stimulate the body and increase body temperature, so exercising just before you go to bed is not a good idea. Allow your body to rest for at least two hours after exercise before going to bed. The same goes for focused mental activity.

MYTH TV helps you sleep.

REALITY Despite the fact that many people nod off while watching TV, the truth is that the sound and flickering light reach the brain even after we have fallen asleep, preventing us from achieving healthy deep sleep. Devices such as laptops, tablets and phones are even worse. They make noises and give off light and you're tempted to check them.

For more on a good night's rest, see Secrets of Healthy Sleep, published by Reader's Digest, from www.readersdigest.co.nz/healthy-sleep



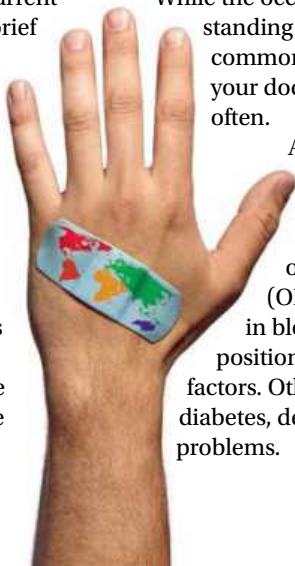
NEWS FROM THE World of Medicine

Rosacea Caused by Genetics and Lifestyle Factors

Don't just blame your family tree for that red, thick, pimply skin. Your habits play a big role, too. In a University Hospitals Case Medical Center (Cleveland, Ohio) study, 275 pairs of twins took lifestyle and medical surveys and underwent skin screenings. Genetics contributed to 46% of rosacea risk, while the rest was due to environmental factors such as sun exposure and alcohol.

Car Sickness Breakthrough

British researchers tested a device that delivers a mild electrical current to the scalp (it feels like a brief tingle) on 20 volunteers who sat in a spinning chair designed to induce motion sickness. Those who received the current before taking a second ride took longer to get sick than before. The current dampens responses in the brain region that processes motion signals. A device might be developed for use in boats and cars in as little as five years.



Sadness Makes You See Grey

In a *Psychological Science* study, 127 participants watched either a sad film or a comedy skit and then indicated the colour of patches that had been de-saturated to more neutral shades. Sad people had a difficult time discerning shades on the blue-yellow axis. Related research has linked perception of these colours to dopamine, the brain's feel-good neurotransmitter that's low when you're feeling down.

Dizziness After Standing May Signal Bigger Issues

While the occasional dizzy spell after standing for a few minutes is common, it's a good idea to tell your doctor if you experience it often.

According to a study from Harvard Medical School, the cause of the dizziness may be orthostatic hypotension (OH) or the sudden drop in blood pressure due to positional changes and other factors. Other causes include diabetes, dehydration and inner ear problems.

Five Simple Strategies to Prevent and Ease Back Pain

Lifestyle changes to keep your back in good condition

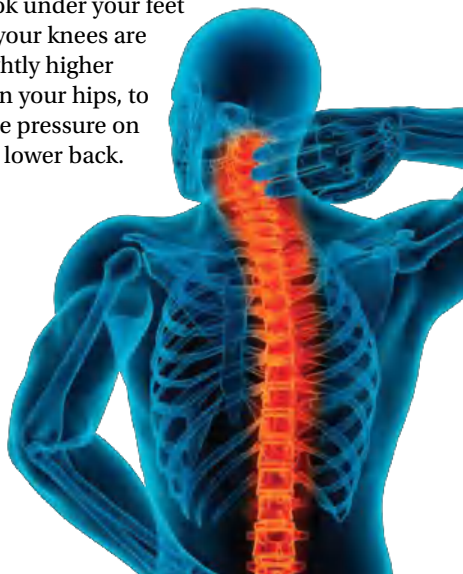
1. BALANCE YOUR DIET Some foods can have anti-inflammatory effects that help ward off back pain. Back-friendly foods include cherries, olive oil, salmon, mackerel, albacore tuna, linseed (flaxseed), walnuts, soy products, nuts, green tea and ginger. On the other end of the diet spectrum, some foods can contribute to pain: processed foods, sunflower oil, margarine, products containing high-fructose corn syrup and foods high in saturated fat and trans fats.

2. LET THE SUN SHINE A lack of vitamin D, the 'sunshine' vitamin, may contribute to back pain. In one study, more than 80% of people between 15 and 52 with chronic low-back pain, were deficient in the vitamin. Some nutrition experts suggest taking 1000 IU of D3 daily.

3. EDIT YOUR WALLET Sitting on a fat wallet all day tweaks the spine and can compress a crucial nerve in the buttocks. That can cause sciatica – inflammation of that nerve. This problem is so common among men that it has a name: wallet neuropathy.

4. TURN UP THE HEAT When back pain strikes, try treating it with a wearable heat wrap rather than ibuprofen or paracetamol. These pads provide 40°C heat for up to eight hours. Also, one study published in *Spine* found they supply more relief than the maximum dose of nonprescription pain relievers – and with longer-lasting effects.

5. DO A LEG CHECK When sitting at your desk, put a footstool or something like a large book under your feet so your knees are slightly higher than your hips, to ease pressure on the lower back.



Keep Your Ears Happy

1. TACKLE EARWAX You produce more earwax as you get older and too much can muffle sounds (a common cause of hearing loss). Ears are self-cleaning as long as the wax doesn't harden. If it does, put a drop or two of olive oil in your ear overnight to soften it (protect your pillow with a towel).

2. TREAT SNORING

If you or your partner snores, take action to resolve it and wear earplugs to bed. At close range, snoring can reach 90 dB – louder than a road drill. In one small study at Queen's University, Canada, all four bed partners of chronic snorers had noise-induced hearing loss in one ear – the one nearest the snorer.

3. CUT DOWN ON SATURATED FAT

It raises cholesterol levels, which can worsen atherosclerosis and accelerate hearing loss due to reduced blood flow to the inner ear. When doctors at the Hospital El Bierzo in Spain, tested 180 people aged over 65 with

hearing impairment, they found that those with high cholesterol had significantly worse hearing loss.

4. GET ENOUGH EXERCISE

Scientists at Miami University in the US, have shown that two months of aerobic exercise training in relatively unfit volunteers increased hearing sensitivity as well as cardiovascular fitness. Don't exercise while listening to loud music – apart from the noise level itself, Swedish scientists have shown that combining loud music with exercise may increase hearing damage.



5. MAINTAIN A HEALTHY DIET

A study of 2111 people aged 49 to 99 at Vanderbilt University in the US revealed those whose diets included more foods rich in vitamin C, vitamin E, riboflavin (a B vitamin), magnesium and lycopene (found in high concentration in tomatoes) had better hearing. Oily fish also seem to convey protection for hearing.

Welcome to our new food pages with a fresh recipe every issue, plus tips and top ideas for stress-free cooking!

SALADS

Middle Eastern Salad

Preparation 15 minutes

Cooking 2 minutes

Serves 4

You'll need for the salad:

2 large pita breads

½ Lebanese cucumber, finely chopped

4 large tomatoes, finely chopped

4 spring onions, thinly sliced on the diagonal

400 g (14 oz) can chickpeas, rinsed and drained

Fresh mint leaves, to garnish

HERB DRESSING

⅓ cup (80 ml) olive oil

Juice of 1 lemon

Salt and freshly ground black pepper

2 tablespoons chopped fresh coriander

2 tablespoons chopped fresh mint

METHOD

1 Open each pita in half using a knife. Toast for 1 minute, until crisp and lightly browned. Tear into bite-sized pieces.

2 To make the dressing, whisk oil and lemon juice in a small bowl. Season with salt and pepper, then stir in coriander and mint.

3 Combine cucumber, tomatoes, spring onions and chickpeas in a large bowl. Drizzle with dressing, then toss until well mixed. Just before serving, gently mix through pita pieces. Serve garnished with mint.

PER SERVING

1637 kJ (391 kcal),
11 g protein, 20 g
fat (3 g saturated
fat), 41 g
carbohydrate (6 g
sugars), 7 g fibre,
587 mg sodium

Tip

Warm pita breads first in a toaster for 1 minute – they'll be easier to open.



Salad Tips

■ Instead of making a dressing, drizzle a salad with a flavoured oil such as walnut or avocado, or a herb-infused oil.

■ Prepare your salad just before serving. Most dressings can be made a day ahead.

■ Blanch any hard vegetables (like broccoli) by briefly plunging them into boiling water, then into cold water to retain colour and halt further cooking.

■ For added flavour and sweetness, toss in some fresh fruit, such as strawberries, apple slices or grapes.

■ A salad of fruits and vegetables may not need any dressing – just a squeeze of lemon, lime or orange juice.



Side dish or main course, salads are versatile and easy to make

Seasonal Salads

150 colourful, healthy recipes from cuisines around the world, ISBN 978-1-922085-87-0. Available from Reader's Digest, call 0800 400 060 or email customerservice. nz@readersdigest.com



SAVE TIME



Use quality convenience foods such as canned chickpeas or lentils. They don't need hours of soaking, unlike the dried varieties. Simply rinse, drain and add to the salad.

MAYONNAISE WAYS

Add the following ingredients to 1 cup (250 ml) good-quality shop-bought or homemade mayonnaise. For a healthier alternative, try ½ cup (125 ml) mayonnaise mixed with ½ cup (125 ml) natural (plain) yoghurt or crème fraîche.

Aioli 2 crushed garlic cloves

Curry 1 tablespoon curry powder

Herb ½ cup (about 30 g) chopped mixed fresh herbs, such as chives, parsley, basil and thyme

Horseradish 2 tablespoons grated horseradish from a jar and 2 tablespoons finely snipped fresh chives

Lime or lemon 2 teaspoons grated zest and 1 tablespoon juice

Mustard

1 tablespoon
Dijon mustard

Wasabi

2 teaspoons
lime or lemon
juice and
1–2 teaspoons
of wasabi
(Japanese
horseradish).



Long Live Your Phone Battery

BY BEN TAYLOR FROM TIME

IN THEORY, modern smartphones can last hundreds of hours on a single charge. But in practice today's top phones will squeeze out about 20 hours at best. With that in mind, we tested both Android (Google) and iOS (Apple) phones to pin down battery-saving tricks that actually work.

Delete apps you don't use

On average, smartphone users download about 42 apps but use only ten daily.

■ **IOS** Tap and hold the app icon, then tap the **X** in the top left corner.

■ **ANDROID** Tap and hold any app icon, then drag it to the top right to uninstall or the top left to remove.

For both operating systems, note that there are built-in apps that you can't delete.

Control which apps run all the time

Apps like Facebook and email continue to run in the background, even when you're not using them, so you'll receive a notification as soon as you get a new message or comment.

■ **IOS** You can turn off background data on an app-by-app basis. Go to Settings > General > Background App Refresh to select apps to turn off.

■ **ANDROID** You can 'restrict background data' for each app. Go to Settings > Data usage. Tap on your app of choice, then scroll to the bottom to restrict background data on cellular networks.



Disable notifications

Some apps, such as those for weather, news and sports, will automatically send you 'push notifications' throughout the day, unsolicited. If you're not interested, disable them.

■ **IOS** Visit Settings > Notifications, and turn off notifications for all but your most important apps.

■ **ANDROID** Go to Settings > Sound & notification > App notifications.

Turn off location services

Map and weather apps need to use your location, but do you need to geo-tag Facebook and Instagram?

■ **IOS** Go to Settings > Privacy > Location Services. You can either turn them all off at once or turn them off individually.

■ **ANDROID** Go to Settings > General > Location. Then use the switch at the top to turn location reporting off.

Forgo vibrations

When it comes to battery life, ringing is a lot less taxing than rumbling.

■ **IOS** Go to Settings > Sounds, and then switch off the two vibrate toggles at the top of the menu.

■ **ANDROID** Use the volume toggle to turn down the ringer, and you'll see a menu pop up at the top of your screen. Here, you can either turn off all notifications for a custom period or receive only 'priority notifications' based on your personal preferences.

Dim the screen

Viewing your phone's millions of pixels at full brightness is a guaranteed battery drain.

■ **IOS** Go to Settings > Display & Brightness. Turn off Auto-Brightness, and then dim the display to your comfort level using the slider.

■ **ANDROID** Go to Settings > Display, and turn off Adaptive Brightness. Then tap on Brightness level and adjust to your preference.

Decrease display time

A phone's single biggest battery drain is the display, and we often leave it on even if we're not looking at the

screen. Set your device to turn off its display after a short period of time, 30 seconds to a minute should be enough.

■ **IOS** Go to Settings > General > Auto-Lock

■ **ANDROID** Go to Settings > Display > Sleep

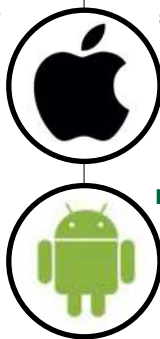
Turn off Bluetooth

Bluetooth, a short-range wireless technology, doesn't drain as much battery power as it used to, but if you don't use it for external devices or data transfer, consider turning it off.

■ **IOS** Swipe up from the bottom of your screen, and tap the Bluetooth icon in the middle.

■ **ANDROID** Go to Settings > Bluetooth, and toggle it off.

Source: *TIME* (May 13, 2015). © 2015 by Time Inc., time.com



Getting Through Airport Security Faster

Simple steps to save time and reduce stress

Security can be the most time-consuming part of your airport journey. But dress appropriately and pack your bags correctly and you'll breeze through airport security. Follow our simple guide and spend more time relaxing before your flight.

Wear slip-on shoes and a shrug-on jacket, and avoid wearing metal. Sensitive scanners can pick up on the metal in jewellery, wired bras, belt buckles and piercings.

Organise your liquids, aerosols and gels. On international flights, these need to be in containers up to 100 ml each and all placed inside a single transparent 20 x 20 cm or 15 x 25 cm resealable plastic bag. Lipstick, mascara, shaving foam, deodorant and toothpaste all count as liquids. Baby food, formula and breastmilk are exempt, as is liquid medication (including inhalers), though you may need to show a doctor's letter or prescription. Hypodermic needles will require a medical certificate.



Laptops and tablets are screened separately, so have them out before you reach the scanner. If flying overseas, charge all your devices or have a charger handy to meet US and UK rules. Pack spare batteries in hand luggage only. Strollers, prams, musical instruments and walking sticks will all have to be scanned, too.

PHOTO: ISTOCK

7 Ways to Get the Most from Hotel Stays

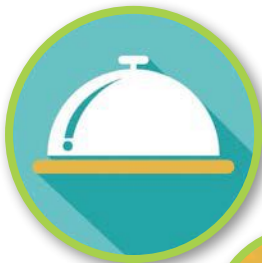
BY TIM JOHNSON

1 IT PAYS TO BE NICE. Room assignments – including upgrades – are often still made by actual people, usually front desk managers. If they associate your name with a friendly face, you may find yourself in a spacious corner suite on your next visit.



2 “ASK AND YOU SHALL RECEIVE,” says Hilary Lewis, a hotel housekeeping manager. Most hotels will be happy to provide extra items, such as DVD players or microwaves, at no extra charge if they have them on hand.

3 LOYALTY COUNTS, SO STICK WITH ONE CHAIN. Frequent travellers can achieve a preferred status level, which comes with privileges – special amenities, freebies and access to perks such as free breakfast or happy hour drinks.



4 IF YOU USE THIRD-PARTY sell-off sites like Expedia, you'll snag bargain rates, but you'll get what you paid for. You'll likely end up with a less-than-ideal room – lower floors, bad views.

5 ASK THE CONCIERGE about local attractions and where to eat.

6 SOME OF THE BEST OFFERS are hidden. Hotels will occasionally give out discounts and perks to guests who post TripAdvisor reviews or fill out hotel surveys. You can also ask to join their email list to keep up to date with special deals and packages.

7 STAR RATINGS SYSTEMS vary widely between countries. For example, in Italy, a hotel can earn five stars by simply having a 24-hour reception desk, rooms that start at 16 m² and receptionists who speak three languages. A single star is awarded for changing the sheets once a week.

Why Worms Are a Worry

All cats and dogs, at some time in their lives, will stick their curious noses – literally – in other animals' business and accidentally contract internal parasites – frequently referred to as worms. This can cause health problems in young and old pets alike, not to mention similar ailments in humans.

The most common parasites are roundworms, hookworms, whipworms and tapeworms. Even healthy-looking animals can be carrying roundworms and tapeworms. In young pets, worms can cause a potbelly, poor growth and diarrhoea. A heavy infestation can even cause a fatal blockage of the intestines. In adult pets, worms can lead to poor coat condition, vomiting and diarrhoea.

Worms also pose a risk to humans – roundworms in dogs and cats (*Toxocara*), for example, can cause blindness in children, though this is rare. Regular worming is essential to protect pets and people alike. Worms aren't choosy, and will live happily inside you, too.



HOW TO PREVENT INTERNAL PARASITES IN YOUR PET

Keep worms at bay with these helpful tips.

- Ask your vet about the most suitable worming treatments for pets.
- Tapeworms rely on fleas to infest your pets, so regular flea prevention treatment is important.
- Note on your calendar when treatments are due.
- Always observe strict hygiene. Dispose of faeces and cat litter every day and wash your hands afterwards. Make sure children do the same and stop them playing with mud. Cover sandpits to avoid cat contamination.



Hurry for this great price!

Reader's digest

HOURS
OF
GREAT
READING

THE BIG ONE

THIS MEGAQUAKE
IS OVERDUE

PAGE 102

The Healing
Power of Hens

PAGE 28

10 Sleep Myths
Debunked

PAGE 15

Child Labour
Tobacco's Shame

PAGE 54

Smart Animals 8
All in a Day's Work 96
Word Power 125

Don't miss
out. Each issue
packed with
real-life drama,
laughs and
inspiring stories

Save

50%
OFF RETAIL

For more details, head to:

ASIA: rdasia.com/subscribe

AUSTRALIA: readersdigest.com.au/subscribe

NEW ZEALAND: readersdigest.co.nz/subscribe



*Pat Cain,
78, cradles
Belle, a
silver-laced
Wyandotte*

energising a

I could talk under
water about
hens, me

Here's a surprising way to
combat loneliness and make
new friends: start keeping hens

The company of hens

BY DAVID THOMAS

IT'S A WEDNESDAY MORNING and the communal lounge at the Wood Green sheltered housing project in Gateshead, north-east England, is a hive of activity. A group of male residents are playing pool. Meanwhile the women chat, place pieces in a giant jigsaw that covers an entire table, or tuck into scones covered with strawberries and cream that have been freshly baked by Lynne Walker, who looks after Wood Green's 65 bungalows and their elderly inhabitants.

PHOTOGRAPHED BY JANE HILTON

The reason why so many people have gathered together can be found in a plastic incubator in one corner of the room. For Wood Green is the home of HenPower, a project that has revealed the incredible effect that something as simple as keeping chickens can have on the lives of elderly people. And nothing raises their spirits quite like new birds being born.

"Have you seen the chicks?" asks resident Doreen Railton, 90. "There are five now."

"They're like babies – aren't they? – trying to come out," says her friend Pat Cain, 79. Sure enough, there in the incubator are five fluffy little birds, making their way into the world.

"They started pecking yesterday," says Owen Turnbull, an 85-year-old retired engineer. "Lynne was up through the night, checking the incubator. She was here at five this morning because the humidity [in the incubator] was going down. I was in at five past seven to see that everything was all right."

Owen looks after the chickens at Wood Green – there are 41 today, but there have been 60 at times – ably assisted by his pal Albert Hibbert. "I'm Owen's apprentice," Albert says, with a smile. "He lets the chickens out every morning and I feed them and get the water. Owen's a good



boss, mind, because he picks up all their droppings!"

As we speak, Owen is setting up a

DVD on the lounge's TV. "We had to give our chickens a dip, as a treatment for lice and mites," he says, explaining what I'm about to see. "Well, it was a cold day so all the ladies came out with their hairdryers to dry the birds' feathers."

Sure enough, the screen is soon filled

“

**The ladies each
dry a damp
bird, like
stylists at a hair
salon. The
chickens seem
to love the
attention**

*Belle and Owen
Turnbull, married
for 60 years, with
Nina and Shirley*



with Wood Green ladies sitting at tables around the lounge, each drying a damp bird, like stylists and their customers at a fashionable hair salon. The chickens seem to be loving the personal attention.

"I think they liked the warmth," says Doreen. "Every now and then they'd lift their wings to let you know they wanted some hot air there."

THE RESIDENTS of Wood Green have the poise of polished performers, which is no surprise.

The HenPower project has been so successful that Owen, Doreen, Pat and

their friends are the stars of a touring roadshow that visits residents in care homes for the elderly. "Last week we were at a home and a lady said, 'But I like roast chicken!'" Pat recalls. "There was a deathly hush. Then we said, 'We don't eat our hens. They're our friends!'"

"She went on and on, asking, 'But what do they taste like?' You couldn't shut her up!" laughs Doreen.

"I know," says Pat. "You should have seen Owen's face!"

As word about HenPower has spread, the men, women and

poultry of Wood Green have made appearances on radio and TV, spoken at cultural festivals, lectured to delegates at university conferences and talked to student nurses and doctors about the needs and experiences of older patients.

They often take their chickens to local schools. "It's lovely when you see the bairns' [children's] faces," says Owen, fondly.

The pupils hold the hens, draw pictures of them and ask streams of questions. "I've only been stumped by one question," says Alan Richards, a former taxi driver, who is one of the

*Ossie Cresswell,
89, relaxes in
the company
of companion
Betty Cresswell*



stalwarts of HenPower. “A kid asked: ‘How many feathers does a chicken have?’ He’d got me there.”

“Thanks to the hens I’ve made friends with people from four to 94,” adds Alan, who in March 2015, received a Points of Light award, given by the British Government to

volunteers who make a difference in the community.

Now, thanks to a £993,000 grant from the UK Big Lottery Fund, HenPower is being rolled out into sheltered accommodation and care homes across England. Pilot schemes are starting in Australia, too.



And according to Douglas Hunter, a director of Equal Arts, the charity that pioneered HenPower, academics at Frankfurt University are keen to test a similar project in Germany.

It all began in the spring of 2012 because an elderly male resident with dementia in a Tyneside care home,

Shadon House, kept repeating a list of women's names and saying how much he missed them.

It took a while for staff to work out that the names did not belong to actual women, but to the hens he used to keep. They wondered whether it would be possible to keep a few chickens at Shadon House.

As it happened, the home was one at which Equal Arts was working. Founded 30 years ago to bring music, painting and other art forms into the lives of elderly people, the charity suddenly found itself setting up a chicken run.

"It seemed like a slightly bonkers idea but we thought we'd give it a go," recalls Equal Arts's director Douglas Hunter. "We thought we'd try a six-month pilot project, but the effect was immediate. The staff enjoyed having the chickens; the residents enjoyed it, and their families and visitors benefitted, too."

BY SEPTEMBER 2012, Equal Arts had received funding to expand the programme into eight care homes in Gateshead. Meanwhile, at Wood Green Lynne Walker was facing a problem common to many institutions catering to the elderly. While the female residents were, by and large, able to make friends with one another, the men were often more isolated.

Alan Richards, for example, had been cut off from his ex-wife and children for more than 30 years,

following a family dispute. "A lot of the time I was just sitting in my house, watching the telly," he recalls.

Life was bleak, too, for Ossie Cresswell, 89, a retired foreman welder. "My wife died 12 years ago and since then I've been on my own. I just had the TV for company. On a good day, I'd get out into the garden, but that was it. There was nothing left in my life."

Then Lynne attended a focus group at the Older People's Assembly about the benefits the chickens had brought at Shadon House. Residents there had not been well enough to look after the chickens themselves, but Lynne saw that the men at Wood Green could manage that job – and it would give them

something practical to do. So she asked Equal Arts to help her set up a second scheme.

Some of the residents were sceptical. "I was dead against it," Alan Richards recalls. "I said it was a ridiculous idea. During the War our neighbours kept chickens. They were all Rhode Island Reds, so I thought that was the way all hens were. Then I saw an article in a magazine and discovered that there were 400 different types of hens. I thought, 'I wouldn't mind getting involved in this.'"

Ossie, meanwhile, needed less persuading. "I went down [to look at the chickens] on the first afternoon and thought it was interesting. There were other people there that I'd seen, but I'd never spoken to them. We started meeting every week and seeing each other and then it became something to look forward to."

Men like Alan and Ossie who had barely spoken to one another for years,

suddenly became firm friends. Then the women of Wood Green joined in as well. They started getting invitations to speak at local schools and old folks' homes and gradually they developed their roadshow.

"When we visit people with dementia, the people who look after them are so grateful you've bothered to be

bothered about them," Ossie says. "We take the hens there, let them out and let people stroke them. Often they start talking when otherwise they'd just be looking at the walls."

The chickens have become characters in their own right. "Can you get anything bonnier than that?" says Owen, pointing to the special run where the smaller bantams are kept. "Bantams are lovely little birds – nosey little things, mind."

He nods at one of the birds. "That light one's a cheeky one!" Then he

“

Men like Alan and Ossie who had barely spoken to one another for years, suddenly became firm friends

”

adds, "I married a bantam. My wife's only five feet tall." Owen has been married to his wife, Belle, for 60 years. Like many of Wood Green's ladies, Belle has a chicken named after her.

"She's a silver lace Ancona," Owen says. "She loves the attention when she goes on the hen roadshows. But she's lazy and getting too fat and too heavy." He pauses and smiles: "That's the hen, not my wife!"

EVERYONE INVOLVED WITH

HenPower has a tale to tell. Some are lighthearted, such as the time they all went to a chicken auction and one of the ladies became so over-excited, and put her hand in the air so often, she ended up bidding against herself.

Then there was the mayor of local town Gateshead who insisted on having his picture taken holding a hen, but turned down the offer of a towel to place between the bird and his smart suit... which turned out to be rather less smart once the hen was removed and the mess she had left was revealed.

Others stories are moving, like the time they visited a stroke victim who had all but lost the power of speech.

"We gave him a hen and he started stroking and stroking her – he was really smiling," says Jos Forrester-Melville, the Equal Arts staffer who leads the HenPower project. "After half an hour I went to take the hen away but he wouldn't let go. Then, with a smile on his face he went, 'I LIKE!'"

"His daughter burst into tears. Her father hadn't spoken in months. The next day she called to say that her father died. She said, 'That was the last time I ever saw him. For months he'd hated his life, but then he was really happy.'"

Time and again the pensioners say how the hens have given them a new lease of life. But it's Ossie Cresswell who sums it up best. After he's described his role in the HenPower roadshows he says, "The best thing is it keeps me from getting down. If you're on your own you've got virtually nothing. But if I've given people happiness, then my life has been worthwhile." **R**

*
* *

NOT REALLY CONVINCING

Employers share memorable excuses for calling in sick at careerbuilder.com:

Employee said that someone glued her doors and windows shut so she couldn't leave the house to come to work.

Employee had just put a casserole in the oven.

Employee's false teeth flew out of the window while driving down the motorway.

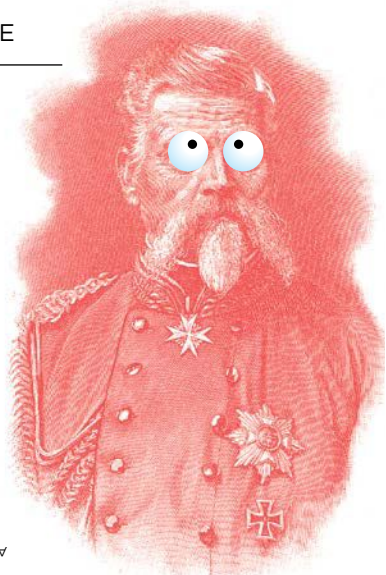
Laughter

THE BEST MEDICINE

TRUE OR FALSE? YOU DECIDE

1. In World War II, a German U-boat was sunk because of a malfunctioning toilet.
2. American combat dolphins, deployed in the Persian Gulf, surrounded and captured an Iranian battleship.
3. The pen used by the US military meets 16 pages of military specs.
4. At the real-life TOPGUN programme – the one the film is based on – there is a \$5 fine for any staffer who references or quotes the movie.
5. The Franco-Prussian War ended in a stalemate and had to be settled by a winner-take-all game of backgammon played by the two countries' prime ministers.

ANSWERS: 1-T; 2-F; 3-T; 4-T; 5-F



FLOCK TOGETHER

I just bought a nice goose-down jacket. I love it – it's warm, it's comfortable. The only problem is, whenever I run into other people wearing goose-down jackets, we all have to walk down the street in a V-formation.

COMEDIAN DAVID ACER

DEAD DRUNK

A man comes to Mrs Smith's door and says, "There's been an accident at the

brewery. Your husband fell into a vat of beer and drowned."

Mrs Smith wails, "Oh, the poor man! He never had a chance!"

The man says, "I don't know about that. He got out three times to go to the bathroom."

AS TOLD BY MICHAEL REISS, WRITER AND PRODUCER OF *THE SIMPSONS*

SLAILED IT

I wanted my snail to move faster, so I removed his shell. But it had the opposite effect because he seems more sluggish.

SUBMITTED BY
PAUL BEILBY



PHOTOS: ISTOCK

ON EXERCISE

Why are my arms so weak? It's like I did that push-up last year for nothing.



COMEDIAN TINA FEY

RED-LETTER DAY

A therapist has a theory that couples who make love once a day are the happiest. So he tests it at a seminar by asking those assembled, "How many people here make love once a day?" Half the people raise their hands, each of them grinning widely. "Once a week?" A third of the audience members raise their hands, their grins a bit less vibrant. "Once a month?" A few hands tepidly go up. Then he asks, "OK, how about once a year?"

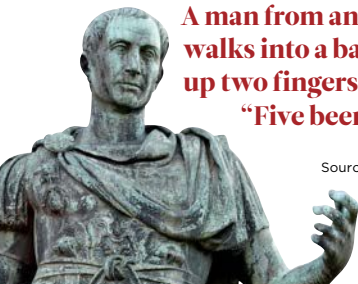
One man in the back jumps up and down, jubilantly waving his hands. The therapist is shocked – this disproves his theory. "If you make love only once a year," he asks, "why are you so happy?"

The man yells, "Today's the day!"

Seen online

A man from ancient Rome walks into a bar. He holds up two fingers and says, "Five beers, please!"

Source: grandparents.com



100 Words of Fun

"International Terminal quickly," I barked, while shoving my luggage in the boot of the cab. Not a word from the startled driver, we screeched away from the domestic terminal. Only a brief four-minute drive, but one I will never forget. It became quite evident by the missing meter, the plain looking interior and the un-uniformed cabbie that this was not a taxi at all. This was just some poor unsuspecting man who was in the wrong place at the wrong time and was too scared to say anything! I felt so embarrassed; I threw him a twenty and hurried away.

AMANDA PALMER

Australia, Highly Commended 2013

100
WORD
STORIES

Don't miss the April 2016 issue of Reader's Digest for the winners of our 100-Word Story Competition. Tales of wit, woe and wonder, all told in exactly 100 words.



I am as guilty as anyone of romanticising
our simpler low-tech past. But the fact is,
my smartphone is a godsend

In Praise of *Technology*

BY ANDREW O'HAGAN
FROM THE *NEW YORK TIMES*

My daughter rolls her eyes whenever I begin my stories of woe. "Tell the one about how you walked to school alone," she says. "And how you used to swim outside, like in a pond. With frogs in it!"

"You know, darling. It wasn't so long ago. And it wasn't such a hardship either. There was actually something quite pleasant about, say, getting lost as you walked in a city, without immediately resorting to Google Maps."

"As if!"

And so it goes. But I've been trying to look at the problem from a new angle, and I keep coming back to the same truth: life is better. One is almost programmed, if over 35, to recall the superior days of a life less needy, the rich rewards of having to try and having to do without. But the actual truth is that my childhood would have been greatly, no, infinitely, improved, if only I'd had a smartphone.

I mean, how could I ever pretend life was even half tolerable in the 1970s? I grew up in a world where people did mental arithmetic just to fill the time.

I've come fully round to time-saving apps. I've become addicted to the luxury of clicking through for just about everything I need.

Yesterday morning, for example, I realised I needed to know something about a distant relative for a book I'm writing. I'm old enough to remember when one had to go to libraries, then scroll for hours through hard-to-read microfiche and take notes. I wrote a whole book that way, my first, and it took forever and it didn't add much to most of the paragraphs.

Yesterday, I had the information from an archive website in about 20 minutes. Then I ordered a car

from Uber to take me to teach a class. I emailed my notes to my office computer from the car, dealt with a dozen emails and read a review of a restaurant I was going to that evening.

Has something gone out of my experience of life by ordering all the shopping online rather than by pushing a trolley around a supermarket

for an hour and a half? Yes. A pain in my backside has been relieved. It is all now done by a series of small, familiar flutterings over the keyboard, which I can do at my leisure, any time of day or night, without running into hundreds of people who are being similarly tortured by their own basic needs.

I have always liked music and the sheer

luxury of having a particular recording when you want to hear it, but nothing in my long years of buying records can beat Spotify.

I've heard many a nostalgist say there was something more, well, effortful, and therefore poetic, in the old system of walking for ages to a record shop. People become addicted to the weights and measures of their own experience. But we can't become hostages to the romantic notion that the past is always a better country.

There will, of course, always be

“
***We can't
become hostages
to the romantic
notion that
the past is
always a better
country”***
”

people who feel alienated by a new thing, and there might be a compelling argument to suggest all this availability is merely a high-speed way of filling a spiritual gap in our lives. Yet I can assure you there was no lack of spiritual gap in the lives of people living in small towns in 1982. It was just a lot harder to bridge that gap. We used to wait for years for a particular film to come on TV. One had practically to join a cult in order to share a passionate interest.

Communication was usually a stab in the dark. You might find someone to talk to about your favourite book, but more likely you wouldn't, unless you moved to New York.

Every day now there's something new to replace the old way of doing a crucial thing that was hard to do. Is it the middle of the night and you live in Idaho and you want to talk to someone about your roses? Is it Christmas Eve in Rome and you want to know where to hear some music and light a candle?

Don't tell me the spiritual life is over. In many ways it's only just begun. Technology is not turning us into digits or blank consumers, into people who hate community.

Instead, there is evidence that the improvements are making us more democratic, more aware of the planet, more interested in the experience of people who aren't us. It's also pressing us to question what it means to have life so easy, when billions do not.

For me, life did not become more

complex with technology, it became more amenable. And what a supreme luxury it is, being able to experience nowadays your own reach in the world, knowing that there truly is no backwater, except, of course, the one you happily remember from the simple life of yore.

My daughter was right to laugh. Because what she was hearing was a hint of vanity and a note of pride in my stories of the unimproved life. In point of fact, we burned with the desire to get out, to meet people, to find our voices.

My favourite record when I was a teenager, trapped in a suburban corner of old Europe, was 'How Soon Is Now?' by the Smiths. I had taken a bus and a train and walked for miles to buy the record. It told a story about giving yourself up to experience.

I don't know where the physical record has gone. But the song is right here at the end of my fingertips as I'm typing. In the new, constantly improving world around us, it took me just under 15 seconds to locate it.

Would anyone care to dance?

R

Are you a passionate defender of the smartphone? Love the ease of being able to find things and communities in the palm of your hand and think that makes our modern technology invaluable? Or do you miss a time when life was lived face to face and voice to voice? We'd love you to share your opinions and experiences. See page six for details on how to contact us – by paper or pixels!

STREET SMART

Satellite navigation and GPS are
no match for the astounding
knowledge of a London cab driver

BY ROFF SMITH
FROM NATIONAL GEOGRAPHIC



*A student rides the
streets of London
learning The Knowledge*

STEVE SCOTLAND thought he knew London like the back of his hand. The native Londoner had spent years working as a chauffeur, negotiating the city's traffic-clogged streets.

So he quietly fancied his chances of passing 'The Knowledge' – the demanding test of London's back streets and landmarks that confronts anyone who wishes to join the elite ranks of London's cab drivers.

"It was something I always wanted to do," Scotland says.

After having a medical check and submitting an application form to Transport for London (TfL) which regulates taxis in London, he set off to familiarise himself with his city in a whole new way.

Nearly five years later, and with more than 16,000 km clocked on the scooter, Scotland is still at it. "I had no idea how tough this would be," he says. "What I knew, or thought I knew, was nothing compared with what it takes to do The Knowledge."

FORGET MENSA and armchair brain-teasers. The Knowledge of London is a real-time, street-level test of memorisation skills so intense that it physically alters the brains of those who pass it.

To qualify, you need to learn by heart all 320 sample runs in the Blue Book, the would-be cabbie's bible. You

will also have to commit to memory the 25,000 streets, roads, avenues, courts, lanes, crescents, places, mews, yards, hills and alleys that lie within a 9.7 km radius of Charing Cross.

Add to that the locations of some 100,000 landmarks and points of interest – pubs, clubs, museums, parks, monuments, railway stations, tube stations, hospitals, schools, police stations, government buildings, embassies, cemeteries, churches, theatres, cinemas – any place a fare-paying passenger might conceivably ask to be taken.

When asked, you'll need to be able to calculate the most direct legal route

“

IF YOU EVER FIND
YOURSELF IN A
LONDON TAXI,
REMEMBER: YOUR
CABBIE IS A TRIED-AND-
TRUE GEOGRAPHY
BRAINIAC

between any two addresses in the entire 182 km² metropolitan area within seconds, without looking at a map, and be able to rattle off the precise sequence of streets and turns.

And you'll have to do this consistently in a series of one-on-one oral exams, called 'appearances', until the examiners are satisfied that you do indeed possess The Knowledge.



Students in deep thought at Knowledge Point School. They are working out the direction of travel for a run they have been given by teacher Derek O'Reilly

If you ever find yourself in a London taxi, remember: your cabbie is a tried-and-true geography brainiac.

EVEN IN THIS TIME of GPS and Google Maps, satellite navigation (Sat Nav) is no match for a London cabbie. In May 2014, *The Guardian* newspaper pitted a cabbie against a driver equipped with Sat Nav. The Sat Nav driver did the run from the newspaper's office in King's Cross to Big Ben, in Westminster, in 22 minutes; the cabbie did the return journey in 18, by taking a slightly longer route he knew to be quicker.

It's not simply a matter of speed, cabbies say. A driver who relies on Sat Nav doesn't know the city. Eighteen-

year veteran David Styles points to the example of a passenger going to Victoria Station. "Depending on which entrance they want, they ask for The Shakespeare or Hole in the Wall. Show me a Sat Nav which not only has that database but can be programmed in seconds, and I'll buy shares in it."

Hail one of London's iconic 'black' cabs (which nowadays can come in any colour) and tell the driver where you want to go, and by the time you've climbed in, he'll have calculated the most direct, swiftest route, without looking at a map.

What if you're not quite sure where you want to go? Say you have tickets to see *The 39 Steps*, but you can't recall the name of the theatre. Just name the

play, and your cabbie will take you to the Criterion on Piccadilly Circus.

FOR MORE THAN 150 YEARS London cabbies have been required to be experts on their city. Victorian hansom cab drivers all had to bone up for the world's toughest geography test, just as the roughly 25,000 drivers of London's cabs must today.

The final series of tests, known as the 'required standard,' or 'req' for short, is known among cabbies as the Nervous Wreck.

Indeed, Steve Scotland would have passed at his last appearance, had he not dropped his hypothetical passenger off on the wrong side of the street at the Moorfields Eye Hospital. "Just nerves," he recalls.

As a result, he's once more astride his scooter this Sunday afternoon, puttering along Great Swan Alley in London's financial district. "A new restaurant has opened up around here, and I want to get it fixed in my mind – just in case," he says. "You just never know what the examiners are going to ask you."

Cabbie apprentices such as Scotland are Knowledge Boys. There are Knowledge Girls too, but fewer than 2% of cabbies are women. Cabbies come from all walks of life – students, tradesmen, lawyers. Most grew up in or around London, but people from elsewhere in Britain, and even a few foreigners, have successfully completed The Knowledge.

"I was studying biology," says Osman Jamal Zai, 24, who left school and began studying The Knowledge. "This just seemed like a better idea, and I'm loving it."

Although cabbies are cagey about what they earn, it's accepted that incomes of £30-£35,000 are not unusual, with operators working extremely long hours believed to be making £50,000.

Aside from the money, the draw for many is the ability to set their own hours and achieve an enviable work-life balance. And unlike many cities – such as Paris, for instance, which imposes strict limits on the numbers of cabs – London is wide open. Anyone of good character can get a cab driver's licence, as long as he or she passes The Knowledge.

While those who can afford to pursue the training full-time can complete it in as little as two years, most have to fit it in around work and family commitments. Five years isn't unusual.

Only a small proportion of those who attempt The Knowledge will make the grade. "You can never actually fail," Styles says. "There's only quitting. You're allowed to keep trying as long as you like." The majority drop out during in the first year when they realise the amount of commitment that is involved.

"There are no shortcuts," points out veteran Alf Townsend, 79, who did The Knowledge in 1962 and still drives his cab a few hours a day. "You can't do it by sitting at home, memorising

maps and street names, and hope to pass that way. You have to get out on the streets, putting in the miles, seeing and experiencing everything firsthand."

IT WAS KING CHARLES I who, in 1636, regulated London's taxi service – the world's oldest – by granting royal permission for 50 hackney carriages to 'ply for hire'.


Dismayed by complaints from visitors at the Great Exhibition of 1851 that London cabbies didn't seem to know where they were going, Victorian police commissioner Sir Richard Mayne made it a requirement that anyone seeking a cabbie's licence be an expert on the city.

A candidate who mastered all the sample cab runs could be considered to have acquired The Knowledge. The

precise number of runs has varied over the years; today there are 320.

Some things never change. The 4.7 km journey between Manor House Station on the Tube's Piccadilly Line and Gibson Square in fashionable Islington remains the first Blue Book run that a would-be cabbie is expected to know.

"I started out very early one Sunday morning," says Robert Lordan, a 33-year-old former schoolteacher. "It was eerily quiet. I felt as though I had the entire city to myself. I was full of excitement." The run, he discovered, turned out to be gratifyingly easy to learn. "I drove it several times to make sure I was familiar with every turn and junction." Then he moved on to the next run, and after that the next. "On average, I would spend three to four hours on each," he says.



Learning North London's intricate one-way systems and dead-ends was the hardest, says cabbie Robert Lordan

A student has to not only memorise the streets linking the two end points but also be intimately familiar with the back streets and landmarks within 400 m of those points.

"An examiner quizzing you on a run is never going to ask you anything straightforward like, 'Take me from Manor House Station to Gibson



EVENTUALLY, IT ALL STARTS TO MAKE SENSE.

"IT'S LIKE PUTTING TOGETHER A JIGSAW PUZZLE," SAYS LORDAN. "SUDDENLY YOU SEE IT"

Square," Lordan says. "He'll always pick some address that's just around the corner or a couple of streets away."

Initial enthusiasm soon wanes in the face of the mind-boggling complexity of London's streets. "For me, it was the intricate one-way systems and myriad dead ends in parts of North London, especially around Islington," Lordan says. "They had me pulling my hair out."

Eventually, he says, it all starts to make sense. "It's like putting together a jigsaw puzzle. Suddenly you see it. You spend so much time on the streets and studying the map at home that it etches itself on your brain."

A study by neuroscientists at

University College London found that the spatial navigation part of the hippocampus (a region of the brain) found in the head of a London cabbie is significantly larger than the ones in the rest of the human population – a result of the intense memorisation and route-finding undertaken while doing The Knowledge.

CERTAINLY, THE HIPPOCAMPI of London cabdrivers get a lot of intensive exercise. Every day David Greenhalgh, a 53-year-old IT specialist who's spent the past two years juggling street explorations and his day job, recites at least 30 runs.

The process is known as 'calling over'. The call over for Manor House Station to Gibson Square includes 12 specific turns or other instructions.

After the 320 Blue Book runs are memorised, the oral tests begin. The first tests are called 56-day appearances, given every eight weeks.

"The examiner asks you to do four runs," says Greenhalgh, who's made it through two 56-day appearances thus far. "Each run is worth ten points. If you get a perfect score of 40 – phenomenally rare – you get an AA grade and advance to the next level."

Lesser scores are awarded A, B, C or D grades. Points are deducted for 'hesitancy'. Making an illegal turn earns you a zero. If you score four grade Ds or after seven attempts you've not scored well enough to move on, the slate is wiped clean, and you start the

56-day tests all over again. This setback happens to as many as 80% of first-time The Knowledge students.

The next exams, known as 28-day appearances, come every four weeks and proceed along the same lines as the 56-day ones, only now the questions are even more demanding.

If you fail to advance after your seven appearances – ‘red-lining’ in the vernacular – you start your 28s again. Fail twice, and you go back to your 56-day appearances.

Eventually, if you persist, you reach your 21-day appearances. Scoring here is the same, only the questions and expectations are tougher still. The final hurdle is a one-to-one interview to show a good working knowledge of the outer parts of London.

Completing The Knowledge, and receiving the coveted green-and-gold badge of a London cabbie, is very emotional, says Lordan.

“I know I got quite teary. They tell me a lot of guys cry when they get their badge – you’ve invested so much of yourself into doing this, to reach the end is just incredible.”

Lordan’s victory came on December 22, 2009. Two nights later, he went out as a London cabbie for the first time, driving a cab he’d leased. Following a long-standing tradition, he told his first fare, a group of South African tourists, there was no charge.

Lordan and I are standing beside an old, green Victorian cabman’s shelter on Russell Square – one of 13 around the city where cabbies can rest, and get tea and bacon sandwiches. Parked nearby is the gleaming black cab he bought eight months earlier, and on which he’s already clocked 22,530 km.

“I love this job,” he says. “I’m always learning something new. As Samuel Johnson said, a man who’s tired of London is tired of life.” **R**

© 2014 BY NATIONAL GEOGRAPHIC SOCIETY, NATIONAL GEOGRAPHIC (AUGUST 2014), NATIONALGEOGRAPHIC.COM.



THE ORIGINAL GOOGLE

The New York Public Library uncovered a trove of questions posed to librarians from the 1940s to the '80s.

Some of the most puzzling:

Is it possible to keep an octopus in a private home?

Can NYPL recommend a good forger?

What does it mean if you dream of being chased by an elephant?

Does the Bible have a copyright? GOTHAMIST.COM

After decades of self-consciousness,
I yearned to let loose on the dance floor

BY LISA FIELDS

The Music in Me

MY PARTNER MICHAEL and I had been dating for only a month when he asked me a question that made me cringe inside.

He wasn't fishing for sordid details about my divorce. He wasn't prying about how much money I made. What he asked was much worse. His exact words were: "Would you like to go dancing with me some time?"

Most people would have said yes without hesitation. Who wouldn't want to hit a club in the city and surrender to the music for an evening?

I wouldn't, that's who. Because I never learned how to dance.

With my most apologetic smile, I confessed, "I'm not very good."

He wasn't deterred. "Well, do you enjoy it?"

I paused, thrown by his question.

Deep down, I've always loved how free I felt on the few occasions when I allowed myself to move with complete abandon at a packed nightclub. Goofing around with my friend Jacki and her Wii Just Dance. Most other times that I felt compelled to dance, I was tense and awkward, worried that everyone was watching and would see that I was doing it "wrong."

After all, nobody ever taught me which way to step or what to do with my hands. On reruns of the TV series *The Brady Bunch*, I watched as the eldest daughter received a lesson from her dad before she went to an



important dance. As a teen, I waited endlessly for my dad to provide my Brady-style lesson, but he never offered and I never asked.

At school dances, I'd sway to power ballads with boys at arm's length, but whenever a fast song began, I'd dash for the closest chair. I was shy and self-conscious and didn't want to look foolish around my peers. I was certain that they'd be critiquing me. It had happened before.

In high school, when I felt too awkward to learn the "YMCA" dance moves, the teen teaching us rebuked me in front of everyone. At every family wedding that I attended during high school and college, my father joked that I'd inherited his (flawed) dancing genes. Even throughout my 30s, my now ex-husband belittled my moves.

But I really liked Michael – so much so, I was willing to step outside my comfort zone. I secretly vowed to become at ease enough with myself to go dancing with him.

I realised that I needed help.

First, I called my Wii pal Jacki, who dances more than anyone I know. She thought that I could learn to enjoy myself if I danced often with someone I was truly comfortable with. I'm completely relaxed around my son and

daughter, even at my most awkward. So I threw an impromptu dance party and pranced around the house with my kids.

Feeling confident, I sought advice from MacKenzie Mushel, SHAPE America's 2014 National Dance Teacher of the Year.

"Many people see dancing in public as a really big risk," Mushel told me. "The hardest part is getting past the anxiety of 'What do I look like when I dance?' If you can find a few dance moves that you're comfortable with, that can be your pillar."

My kids and I started dancing regularly, and I relaxed about my technique. Practising helped me ease into the music without wondering what

to do. Within weeks, I felt ready to dance in public, but because of my history of shyness, I contacted an expert.

Bernardo Carducci, director of the Shyness Research Institute at Indiana University Southeast, told me to think positively, because I've always clung to people's criticisms about my dancing.

"When you're highly self-conscious, you focus on your negative characteristics, and you select to remember one negative comment you receive instead of the 50 things you did right," he said. "The truth is, people don't care how you dance; they care how they dance."

“I’D SWAY TO
BALLADS WITH
BOYS AT ARM’S
LENGTH, BUT
WHENEVER A
FAST SONG
BEGAN,
I’D DASH FOR
THE CLOSEST
CHAIR”

Carducci also urged me to dance sober, because people who drink to overcome shyness attribute their success to alcohol, not themselves.

That week, I invited my salsa-dancing friend Paula to our local nightclub. I sipped soda water until the DJ played a song that I liked, and we headed to the dance floor.

Only ten people were dancing, so there was no crowd for camouflage. Nonetheless, I danced how I'd practised at home. It felt invigorating! I even lifted my hands above my head, which I'd never done in public before.

"You're not a bad dancer!" Paula shouted over the music, wondering why we were there. That felt good.

NOT LONG AFTERWARDS, Michael and I walked past a particular bar and I suggested that we stop in. (I didn't mention that I'd wanted to go for years but had shied away because of the dance floor.)

Inside, the music blasted. Couples grooved on the dance floor. Michael and I sat and got caught up in conversation. An hour later, we still hadn't left our bar stools, so I boldly asked him to dance.

I grabbed Michael's hand and steered him toward the gyrating masses, even though a little voice inside my head was stage-whispering, The music isn't right – how am I going to dance to a live band?

That's when I realised that whatever happened that night didn't really matter.

My real victory dance, so to speak, had taken place when I went out with Paula. I didn't need to prove to Michael that I was brave enough to move on a dance floor; I needed to prove it to myself, and I'd already done that. If I could dance in a room full of strangers, surely I could do it again with the man who loved me.

The band played and I half-swayed, half-danced with Michael, who had no idea what lengths I'd gone to reach that moment. It was empowering to move without apologising or feeling awkward. I felt free.


Later, I realised that I couldn't recall how Michael had looked when we were dancing, which made me chuckle. Carducci was right: I'd been so obsessed with myself, I hadn't even paid attention to the man I love. I guess that I'll have to ask him to go dancing again soon. **R**

*


* *

PEDAL POWER

When humorists heard Hollywood was making cyclist Lance Armstrong's fuel-injected story, they suggested some alternative film titles to *The Program*. These included *L.A. Overconfidential*; *There Will Be Blood Tests*, and *Needlejuiced*. TOP5.COM



A black plastic garbage bag provides inadequate protection for a young worker in the tobacco fields



Kids under 18 can't legally buy cigarettes but they can – and do – work on tobacco farms. They say the hazards are worth the risks so they can support their families

Children *of the* FIELDS

BY ROBERT ANDREW POWELL

THE SUN HAS YET TO RISE in rural North Carolina, US, but the muggy, breezeless weather hints at yet another very hot July day. About a dozen Hispanic boys and girls, ages 12 to 15, slowly emerge from a cluster of mobile homes on the outskirts of town, rubbing their eyes as they whisper goodbyes to their mothers. The kids wear long-sleeved shirts and heavy denim jeans even though temperatures in the tobacco fields where they work will exceed 38°C. They carry bottles of water and Gatorade in one hand and plastic garbage bags – ad hoc hazmat suits – in the other.

A few minutes before 6am, the soft crunch of gravel announces the arrival of a black SUV driven by a man who works for a tobacco farmer. He'll shuttle the children to the field an hour away, and drop them off behind a thick stand of pine trees, hidden from the main road. There's almost no chance that state inspectors will notice the children or check whether they get regular water breaks (they do), have access to bathrooms (they don't), and are legally permitted to work.

When the kids get to the field, they poke neck and armholes in their garbage bags, drape them over their torsos and pull on disposable plastic gloves. The goal is simple: avoid touching the tobacco leaves, which can leach nicotine into the skin – especially when tobacco leaves are wet, such as early in the morning, before the sun burns off the dew. The price for repeatedly coming into contact with the toxic chemical – nausea, vomiting, dizziness, headaches, loss of appetite, sleeplessness – is made worse on days when the plants have been sprayed with insecticide to kill off budworms.

Fifteen-year-old Edinson Ramirez explains that when he first started working tobacco, he absently used his shirt sleeve, which had come into contact with the wet leaves, to wipe sweat from his face.

"After lunch, my face started stinging," he says. "It felt like somebody threw hot sauce on me."

Nicotine poisoning is also called green tobacco sickness. All the kids have heard of it, but when asked if they've ever suffered from it, they all say no. Yet when asked specifically about the common symptoms, everyone shares stories. Have you vomited? Yes. Many times. Dizziness, headaches? Sure. Sleeplessness? Every night.

Today, the kids 'top' the tobacco by walking up and down row after row of leafy green tobacco plants, plucking off any white, teacup-shaped flowers and tossing them to the ground. Plastic-covered fingers search the base of each stalk for small dwarf leaves called suckers which, like the flowers, divert nutrients away from the valuable main leaves. With the foreman monitoring the speed at which they work, the kids also pull weeds from around the base of the plant and right any tipsy stalks that have fallen into other rows. When one row is finished, they start down the next. Their shift lasts 12 hours.

"He'll fire your ass" if you miss any suckers or if you go too slowly, says Neftali Cuello, referring to the foreman. Neftali is a crew elder at age 19. She began working in tobacco fields when she was 11.

IN BRAZIL, INDIA, Russia and other countries, no-one under age 18 can legally work in tobacco fields. Yet in the US, a child as young as 12 needs only a parent's permission

to help harvest the plant. By age 14, even that isn't necessary. And while children under 16 in the US can be limited to 18 hours a week behind the counter at Starbucks or Walmart, kids of the same age who harvest tobacco have no federal restrictions if school is out of session.

In May 2014, Human Rights Watch published *Tobacco's Hidden Children*, a report based on interviews with 141 children aged seven to 17, most whose parents are Hispanic immigrants, who said they had worked in tobacco farming in the US in 2012 or 2013. The majority of the children interviewed for the report worked the fields primarily during the summer, though a few were migrant workers, travelling year-round alone or with their families to different locations to work. The report outlined the 'excessively long hours' children often work and the trouble kids can have collecting even a minimum wage for this work, a repetitive labour that 'strains their backs and taxes their muscles.' And, according to the report, nearly three quarters of the child workers on tobacco farms who were surveyed experienced symptoms consistent with green tobacco sickness. Human Rights Watch called on tobacco growers to stop using child labour, a call that child advocates and public health experts have been making for decades.

"Children are not small adults," explains Thomas A. Arcury, a professor of family medicine at Wake Forest Baptist Medical Center. "Nicotine and pesticides from tobacco can have a long-term negative effect on the kids'



MANY OF THE CHILD WORKERS SURVEYED HAD SYMPTOMS CONSISTENT WITH GREEN TOBACCO SICKNESS

developing neurological, reproductive and musculoskeletal systems."

Although many children still work tobacco fields in North Carolina and other states, the report altered the hiring practices of some farmers. Several labour contractors in North Carolina backed off on hiring children this season, a decision that has frustrated, of all people, the kids. The truth is that despite the long hours, possible health effects and low wages, many kids say they need and want to do this work. And their parents aren't stopping them – in fact, many kids work alongside their parents.

ONE EVENING as I drove around the central region of North Carolina, I came across six boys playing soccer on a lumpy patch of grass. Their goalposts were fashioned from snapped tree branches. Each boy told me



Workers stand on narrow rafters while hanging tobacco to dry

he'd worked tobacco the previous summer, but this year the boys weren't working at all. "You have to be 18 now," explained Eduardo Cruz, 15. I asked what he was doing instead this summer, and he told me he was doing nothing. Which could be good, in theory. He can play soccer. He can be a kid. Except every one of the boys told me he'd rather be working – that is, he'd rather be helping his family.

Edinson Ramirez began topping tobacco at age 12. "I started working because my mom is a single mom,

and I saw how she struggled with money," he says. "She would come home later and later every day. It was hard for her to pay the bills, to have food on the table. So I thought maybe if I went to work, I might help with the money."

Neftali's mother started working tobacco to support herself and her six kids after she left Neftali's father several years ago. Tobacco has never paid much money, but there weren't many other options for a person in her circumstances. She first brought her kids into the fields so she could watch them when they were out of school.

"She thought we wouldn't last, that we'd see how horrible it is and not come back," Neftali says. "But me and my sisters, we wanted to help out."

TODAY, ECONOMIC necessity may be the biggest factor driving kids to work tobacco fields, but the practice is grounded in tradition. Through the 1960s, schools adjusted their schedules so children could help

out with planting, topping and harvesting the plant. At a tobacco farm museum in the town of Kenly, North Carolina, I talked to Mary Cavanaugh, a grandmother who grew up in the state and who worked the fields when she was young. Her memories aren't negative. "Everybody worked the fields," she recalled. "It was how we made our summer money."

Tom Young, a former helicopter crew chief for the Air National Guard and now a successful novelist, grew up on a tobacco farm in North Carolina in the 1970s. In a column he wrote in June 2014 for *USA Today*, Young respectfully disagreed with the Human Rights Watch request to ban children from tobacco fields. Before he started first grade, Young says, he was driving a tractor and chopping weeds under his father's close supervision. He topped tobacco like Neftali is doing today and helped hang harvested

leaves in curing barns. He handled tobacco directly when he and his brother stuffed cured leaves into sacks in preparation for market. His own experience educated him on responsibility, he wrote, and on what it takes



NONSMOKING ADULT TOBACCO WORKERS HAVE SIMILAR LEVELS OF NICOTINE IN THEIR BODIES AS SMOKERS

to finish a job. Potential exposure to chemicals or heatstroke was mitigated with 'plain old common sense'. Sit in the shade for a while if you get dizzy. Drink lots of water. Handle tobacco leaves with caution.

"Don't get me wrong: I don't recommend smoking. It'll kill you," Young asserted in his column. "But handling tobacco leaves never hurt me by giving me nicotine poisoning. I never experienced it and never saw anyone else suffer from it."

The Human Rights Watch report concedes that the long-term effects of nicotine absorption through the skin aren't known. However, it contends that research shows the adverse effects of smoking on adolescent brains and that nonsmoking adult tobacco workers have similar levels of nicotine in their bodies as smokers. "The US government and the states have an obligation to protect children from

dangerous and exploitative work,” the report concludes.

Clifford Douglas, director at the University of Michigan’s Tobacco Research Network, believes that the big tobacco companies have the power – and the responsibility – to improve child labour practices. “The victims here are mostly poor and largely invisible to the rest of us, but that doesn’t mean that they don’t need to be protected,” Douglas told VICE News in May.

Marty Otañez, a University of Colorado assistant anthropology professor and founder of fairtradetobacco.com, thinks that more independent oversight of farm conditions and union representation could help protect migrant and seasonal tobacco workers, especially children. “It’s not about just looking at the public health issues of smoking any more, but taking a holistic approach to holding a company accountable,” he told VICE News. “The cost of tobacco is low, but the impact is huge.”

THE SUN IS STILL shining at 7pm when the shift finally ends. The temperature holds steady at 33°C. Neftali collects her daily pay from the foreman. About \$85 in cash. She rides back to the trailer park with her mother, her sister and a couple of the boys from the crew. Even though she’s physically tired, she feels amped when she gets home, wide-awake. She forces herself to eat something, though she is not really hungry. She talks to a friend on the phone. She won’t get to bed until after midnight. The release of sleep eludes her for a few more hours.

“It’s really, really bad, how hard it is for me to fall asleep,” she admits. “I get only two or three hours at most. Then I wake up, and it’s time to go again.”

The insomnia, the lack of appetite. That sounds like it could be the nicotine. She shrugs her shoulders. Yeah, maybe. It’s hard working in the fields, definitely. But the dangers of tobacco? That’s not something she has the luxury of worrying about. **R**



OVERLY-EMOTIONAL TECH SUPPORT QUESTIONS

Do you often feel like you’ve lost your Control key?

Do you worry that you’ll never have enough memory?

How’s your relationship with your motherboard?

Have you tried turning it off, taking a day for yourself, then
turning it back on?

LUKE STRICKLER VIA MCSWEEEYS.NET

Quotable Quotes



YOU HAVE TO BE GOING TO A PRETTY AWFUL PLACE IF GETTING THERE IS HALF THE FUN.

MISS PIGGY, celebrated Muppet

It's never too late to have a happy childhood.

TOM ROBBINS, novelist

GOD GAVE US MEMORY SO THAT WE MIGHT HAVE ROSES IN DECEMBER.

J. M. BARRIE, author

I see life as like being attacked by a bear. You can run, you can pretend to be dead, or you can make yourself bigger.

AMY POEHLER, comedian

A man who procrastinates in his choosing will inevitably have his choice made for him.

HUNTER S. THOMPSON, journalist



Always be more than you appear and never appear to be more than you are.

ANGELA MERKEL, Chancellor of Germany



Fame can take interesting men and thrust mediocrity upon them.

DAVID BOWIE, late rock superstar

Nothing in life is to be feared, it is only to be understood. Now is the time to understand more, so that we may fear less.

MARIE CURIE, Nobel Prize Winner, Physics (1903) and Chemistry (1911)

A woman with voluminous, wavy red hair is shown from the chest up. She has a distressed expression, with wide, staring eyes and a slightly furrowed brow. She is covering both of her ears with her index fingers. She is wearing a bright yellow top and large, ornate earrings. The background is a solid, vibrant pink. In the top left corner, there is a logo consisting of a red and white geometric shape with the word "PSYCHOLOGY" in white capital letters.

PSYCHOLOGY

Here's what happens
when small, everyday noises
ruin your life

CHEWPHOBIA

LUNCH AT THE MARRIOTT HOTEL in the southwestern US city of Mesa was a buffet of overcooked chicken and soggy enchiladas. I'd recently met a friendly man with a shaved head and a pale oblong face named Paul Tabachneck, so we sat down together at a table to eat. Tabachneck ate carefully, eyes trained on his plate or a spot on the beige walls. But his conversation was lively – he talked about busking as a guitarist in the New York subway while trying to achieve his dream of being a professional musician.

After about ten minutes, I scraped my knife against my plate while cutting my chicken. Tabachneck whipped his head around to look at me, his eyes suddenly cold.

"Did you have to do that?" he snapped. "And did you know that your jaw pops when you eat?"

We're all annoyed by annoying sounds: fingernails on chalkboards, car alarms, Fran Drescher's nasal tones. But for some people, particular sounds send them into an unbearable frenzy. There's the Atlanta journalist who wanted to reach across the table to strangle his loudly chewing father; the Arizona computer scientist who hated the sound of knives so much that his girlfriend developed a phobia too; the Oregon housewife who moved her family members out of her home so she wouldn't have to listen to them.

Psychologists call them *misophones* – people with an acute reaction to specific, usually low-volume sounds.

But because the condition is poorly understood, they struggle to convince others that their problem isn't a form of neuroticism. In this hotel, where one of the first scientific conferences on misophonia was being held, the afflicted finally met others of their kind and shared their tales of aural agony. You just had to be very, very careful with your cutlery.

When Tabachneck was 14, he and his father were watching a movie at home in Pittsburgh. His dad started pushing his ice-cream into a puddle, clinking his spoon against the bowl.

Up to that point, Tabachneck's relationship with sound was normal. He loved music and enjoyed hearing people laugh; he found sirens somewhat grating. But this clinking was different – it provoked a combination of anxiety and nearly physical agitation. It was the beginning of a lifetime of noise-related misery.

Tabachneck went to college to study computer science but dropped out

because the clicking in the computer labs made him so tense. He took a job in customer service and found he had a knack for it. But some colleagues made him crazy. One man spat chewing tobacco, another talked with his mouth full, and a third brought in an old keyboard because he liked the sound of the keys.

Tabachneck's personal relationships also suffered. He loved one girlfriend enough to consider marrying her, but he had to eat in a separate room to avoid hearing her chew. A later romance ended because the woman smacked her chewing gum.

He's now dating someone who occasionally cracks her joints. "Most people can't be in a relationship with a misophone," he says, "because they don't want to feel guilty for eating cereal in a porcelain bowl."

After hearing problems were ruled out – Tabachneck's only abnormality was perfect pitch – his issues were thought to be psychological. Over the years, doctors gave him different diagnoses and medications. Nothing made sense until an audiologist told Tabachneck in 2010 that he seemed to be a textbook case of an emerging disorder called misophonia.

In 1997, Oregon audiologist Marsha Johnson met a girl who couldn't bear the noise her father made when he chewed his nails. Other cases trickled in, and she talked to fellow audiologists who had also observed the condition. Johnson has become an advocate for the disorder, creating

an online forum and helping to organise the Arizona conference.

She and other experts view misophonia as an 'old brain' problem, probably located in the part of the cortex that processes emotion.

"When people hear these sounds, they react with intense emotion," she says.

"It isn't a higher cognitive function where you're going, 'I don't like white chocolate lattes.' This is like a wasp sting – you slap, jump, run, and scream."

It's impossible to know how many sufferers there are. Of the 4000 misophones who post on the forum, half a dozen were at the Marriott. Among them, Tabachneck was a sort of star. His song 'Misophone' had circulated, and Scott, an engineer, approached him at a break. They talked triggers.

"Burping has always bothered me," Tabachneck told him. "And my girlfriend does this thing where she

“**I sucked on a peppermint. Tabachneck yelled at me, “What are you doing? Didn’t we talk about this?”**”

COURTESY OF CHARLES BETHEA. © 2013 BY CHARLES BETHEA.

cracks her neck, and you snap back like that." He imitated the manoeuvre.

"There's a woman here who does that," said Scott. "There's also where you hear something that sounds like somebody cracking knuckles, and all of a sudden, you're hypervigilant."

"You're looking to find who cracked their knuckles," said Tabachneck, nodding. "Always looking. It never ends."

Misophonia is not included in the *DSM-5*, the so-called bible of psychiatric diagnoses – it's too recently observed, for one thing. But whether misophonia is a mental disorder or not doesn't really matter for people such as Tabachneck, who experience life-altering discomfort daily. At the conference, he performed 'Misophone'. A crowd gathered to talk to him afterwards. As I took notes behind him, I absent-mindedly sucked on a peppermint, the sound barely registering above the chit-chat. Tabachneck wheeled around, his face shifting from warmth to disgust. "What are you doing? Didn't we talk about this?" he yelled at me.

Johnson says misophones will try anything for relief. "You could say, 'I'll hit you on the head with a guitar, and it will cure you,' and you'd have a hundred people lined up to pay you \$5000 to hit them on the head."

She's testing an approach that uses sound-generating equipment to weaken an individual's connection between certain sounds and the autonomous nervous system – paired with cognitive therapy.

COLOURS OF NOISE

Different colours of noise are used to drown out irritating sounds.

White noise has a flat power spectrum. It sounds like static.

Pink noise has a spectrum inversely proportional to its frequency. It sounds like a rain shower.

Brown noise has a spectrum inversely proportional to the square of its frequency. It sounds like a distant waterfall.

Desperate misophones often try to drown out irritating sounds with an ocean of ambient noise. Some work as Zumba instructors or in bowling alleys; others use iPods, fans and headsets that play white noise, lower-frequency pink noise and lower again brown noise.

Following the conference, Tabachneck conducted his own experiment: he went to a film. At a prior outing, one couple was eating popcorn so loudly, it seemed like a deliberate provocation.

This time, advised by one of his new misophonic buddies, Tabachneck requested a headset for the hearing impaired and found a seat in the back of the theatre. With the headset's padding, the popcorn-chomping sounds were dampened, disappearing as the film filled his ears. He relaxed.

"Towards the end," he says, "I actually removed the headphones to hear the audience's reaction to the last few scenes. And it was totally worth it." **R**

Life's Like That

SEEING THE FUNNY SIDE

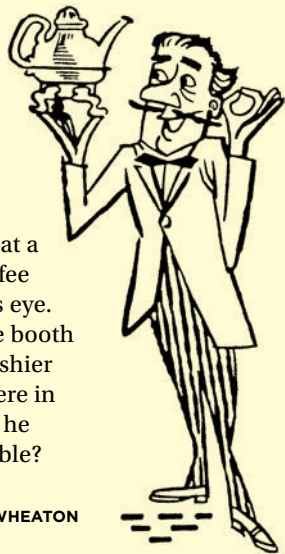
From the Archives

This 50-year-old letter from March 1966 reveals a clever trick that could be performed far more simply today with a mobile phone:

My friend and her husband invited me to lunch at a local restaurant. When it came time to order coffee and dessert we were unable to catch the waiter's eye.

Finally, the husband went to the public phone booth and dialled the restaurant number. When the cashier answered, he asked if there were two women there in red dresses. She assured him there were. "Well," he said, "would you please send a waiter to their table? I think they're ready for dessert."

SUBMITTED BY JANICE WHEATON



BETTER LUCK NEXT TIME

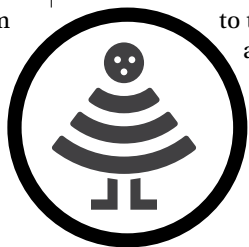
While volunteering in a soup kitchen, I hit it off with a very attractive single man. It was a relief, since my mother and I always laughed because the men to whom I was drawn were inevitably married. So, optimistic about my chances, I asked my new friend what he did for a living. He replied, "I'm a priest."

SUBMITTED BY LISA SHASHA

ALL THE MOD CONS

While staying at a small bed and breakfast recently, my husband found some unexpected amenities for customers. According to the list, there was a 'washing machine, dishwasher, ironing board and free wi-fe'.

SUBMITTED BY
EMMA COX



PHOTOS: ISTOCK



GIVING THANKS

Thank you, hard taco shells, for surviving the long journey from factory to supermarket to my plate, then breaking the moment I put something inside you. Thank you.

LATE NIGHT HOST JIMMY FALLON

TAKING THE MICKEY

My daughter was playing with her friend and they were pretending to be Disney characters. Daisy said her friend's name was going to be Alison and I racked my brains trying to recall a character with that name.

"You know," my daughter said, "Alison Wonderland."

SUBMITTED BY GENNA BURTON



COMES IN BLACK

My five-year-old son is crazy about cars, so I took him to his first car show. He loved seeing all the different models and brands and gushed over the big engines, the colours and the wheels, too. But the car he was most impressed with was a hearse. "Mum!" he shouted. "Look at all this storage!"

SUBMITTED BY SARA SIMERAL



The Great Tweet-off: Canine Edition

Man's best friend gets a good run on Twitter. Here's a sample of our favourites from dog-lovers all over the globe:

I spend three minutes every day choosing a TV channel to leave on for my dog. Then I go to work, and people take me seriously as an adult.

@DAMIENFAHEY

Just realised a pregnant dog is full of puppies. That's the best.

@SHUTUPMIKEGINN

Relationship Status: Just tried to reach for my dog's paw and he pulled it away so I pretended I was reaching for the remote.

@BUHSBABY_BABY

"We're eating dinner soon. Don't fill up on homework." – Dog mom

@BAZECRAZE

You don't even need a dog to go to the dog park. You can just go and play with the dogs and if someone asks which one's yours, you can say, "Haha, yeah."

@KEVINFARZAD

Sorry I wasn't listening when you were talking about your dog. I was busy looking in my phone for a picture of my superior dog.

@PRIMAWESOME



I discovered the three little words that
broke through my father's dementia

Why I Study Memory

BY DR WENDY SUZUKI, ORIGINALLY TOLD ON STAGE IN
NEW YORK AT THE MOTH AND ADAPTED FOR RD



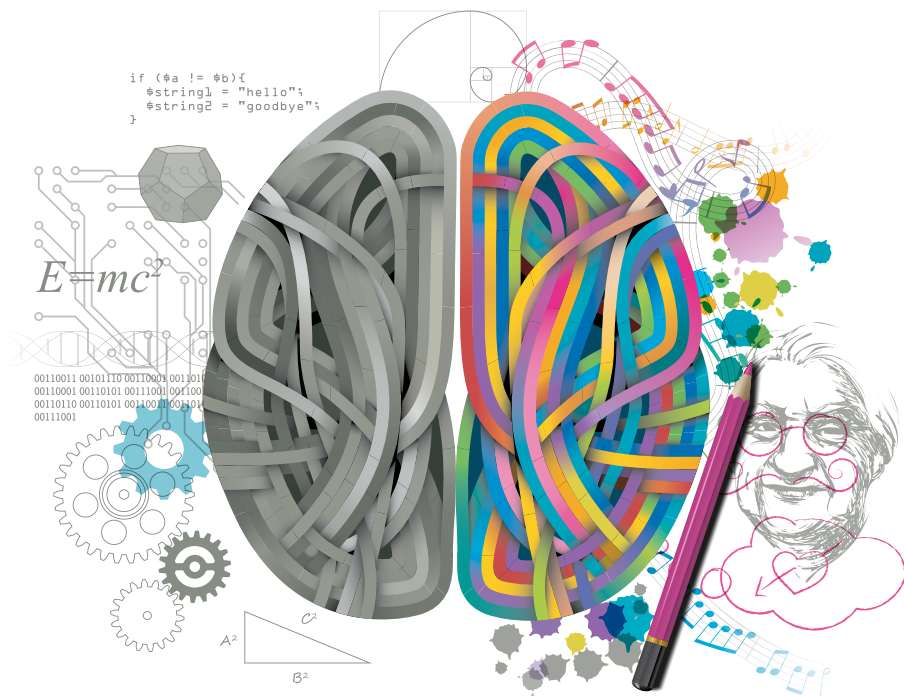
WENDY SUZUKI
is a professor
of neural
science and
psychology at
New York
University,
and is the
author of
Healthy Brain,
Happy Life.

LONG BEFORE I EVER wanted to be a neuroscientist, I wanted to be a Broadway star. But despite my early showbiz dreams, I quickly and easily fell into a life of total science geekdom, and I followed those scientific aspirations to the University of California, Berkeley, my family's alma mater.

Now, I come from a very serious Japanese American family. We are always pleasant and very polite but never overly affectionate. You can think of us as a Japanese American version of *Downton Abbey*, without the accent, the servants or the real estate. That's us. So when the time came, Mom and Dad packed me up in the car and drove me there and – again, *Downton Abbey* – we didn't hug. We just waved goodbye.

Soon after arriving at the university, I found the perfect outlet for my science geekiness: a class called The Brain and Its Potential, taught by Professor Marian Diamond. On the first day of class, she slowly opened the lid of the hatbox she had brought and very carefully pulled out a real human brain, the first one I had ever seen.

She told us that what she was holding in her hands was the most complex structure known to humankind; it defined our personalities and creativity and allowed us to go from laughing to crying from one second to the next. She said that one of the most amazing things about the brain is that it can change in response



to the environment, a trait called brain plasticity. It was at that moment I realised I wanted to be a neuroscientist.

For my career in neuroscience, I studied a form of everyday brain plasticity: long-term memory. I became an expert in the anatomy, physiology and function of the brain areas important for long-term memory, fascinated with how a single experience could live on in our brains for 60, 70, even 80 years.

But one day, after I had started my own research lab at New York University, a particularly poignant newspaper article about the bond between a father and son that had been formed late in life made me realise that despite the fact I was a memory expert, I spent very little time thinking about the personal aspects of memory – that is, how precious our memories are and how they define us.

Some time after I read that article, my mother called to tell me that Dad wasn't feeling well. Not only that, she said he couldn't remember how to drive to the 7-Eleven where he had bought his morning coffee for the past 30 years.

Now, that was scary. I jumped into action and called my colleagues at Stanford University to find him the best neurologist I could find. Dad got better, but his memory didn't recover.

Me, I just felt guilty. What good was being an expert on memory if I couldn't do one little thing to help my father get his memory back?

As I had got older, my relationship with my parents had grown closer, and I would call them every Sunday to chat. But after my Dad's memory problem developed, I knew I wanted to start to shift our relationship in a new direction.

While there was never any question that my parents loved my brother and me, the fact was, we never said "I love you" to each other as adults. I decided that I wanted to start saying those words to my parents. But because we had never said it before, I couldn't just start saying it to them out of the blue. I would have to ask permission.

I was feeling uncomfortable about making this call, but I realised it

wasn't because of the awkwardness of making the request. It was because I was afraid they might say no.

But there was only one way to know their answer, so one Sunday, I gathered up all my courage and called. My theme that night was *keep it light*. I said, "How you doing? Here's my

week. How was your week?" And sometime during the conversation, I said, "Hey, Mom. You know, we never say 'I love you.' What do you think about the idea of starting to say that when we talk to each other?"

She paused. There was a long silence, and my stomach went all the way up to my throat. Then she said, "I think

that's a great idea."

Thank goodness she said yes! I said to myself. But keeping with my theme, I said, "That's great!" and we continued our conversation.

Then the tension started rising again. It's one thing to agree to say "I love you," but it's another thing to actually say it.

It had been my request, so I took the bull by the horns. I said, "Okay" – in other words, *Get ready, Mom*. "I love you!" And she said, "I love you too!" And we had done it.

Then it was Dad's turn. I knew because I made it through with Mom, Dad would be easy. So I asked

“
***While there
was never any
question that
our parents
loved us, the fact
was, we never
said “I love you”***
”

my Dad. He said yes. We said our awkward "I love yous", and the night of the Big Ask was over.


I was triumphant, but as soon as I got off the phone, I broke down in tears. Not only had I said "I love you" to my parents for the first time as an adult, I realised that night I had changed the culture of our family. Forever.

The next week, I called as usual, and you'll be happy to know that my "I love you" with my mom was much less awkward. Then it was time to talk to Dad. I realised that he might not remember we had made this agreement last week, so I was ready to remind him. But that night he surprised me. Because that night and every Sunday since, he has said "I love you" first.

Now, you have to remember that sometimes my dad can't quite remember whether I'm visiting for Thanksgiving or Christmas. But somehow, he was able to make this memory stick.

And I know why. As a neuroscientist, I know that emotional resonance helps us to remember, it pushes new memories into the long term.

So the love or maybe even the pride he felt because his daughter asked whether she could say "I love you" to him – it beat dementia and allowed him to form a new long-term memory. You can be sure that I will keep that memory for the rest of my life.

And now *that* is why I study memory. 

TYPES OF MEMORY

Your memory has two main components: a working memory faculty for thoughts currently active in your mind, and a long-term store of events, skills and facts.

Short-term (Working) Memory

Its principal characteristic is its temporariness – it is quickly saturated. We can retain on average seven unassociated items (such as words or numbers) for a few minutes. This is called 'the span'.

Long-term Memory All the facts that you know, all the things that you can do, many of the events in your life – this huge store of knowledge is what makes up your long-term memory.

Episodic Memory (personal events)

You use your episodic memory to answer questions such as, 'What did you do last weekend?' or to remember the first time you swam in the ocean.

Semantic Memories (facts) This is our store of general knowledge: facts, concepts and vocabulary. It allows us to answer questions such as, 'What is the capital of Italy?' We know the answers but we have generally forgotten where, when and how we learnt them.

Procedural memory (skills) These include physical and mental abilities acquired over time, such as driving a car or using a keyboard.

Source: *Your Active Brain* © 2016
Published by Reader's Digest Australia

Volcanoes

BY HAZEL FLYNN

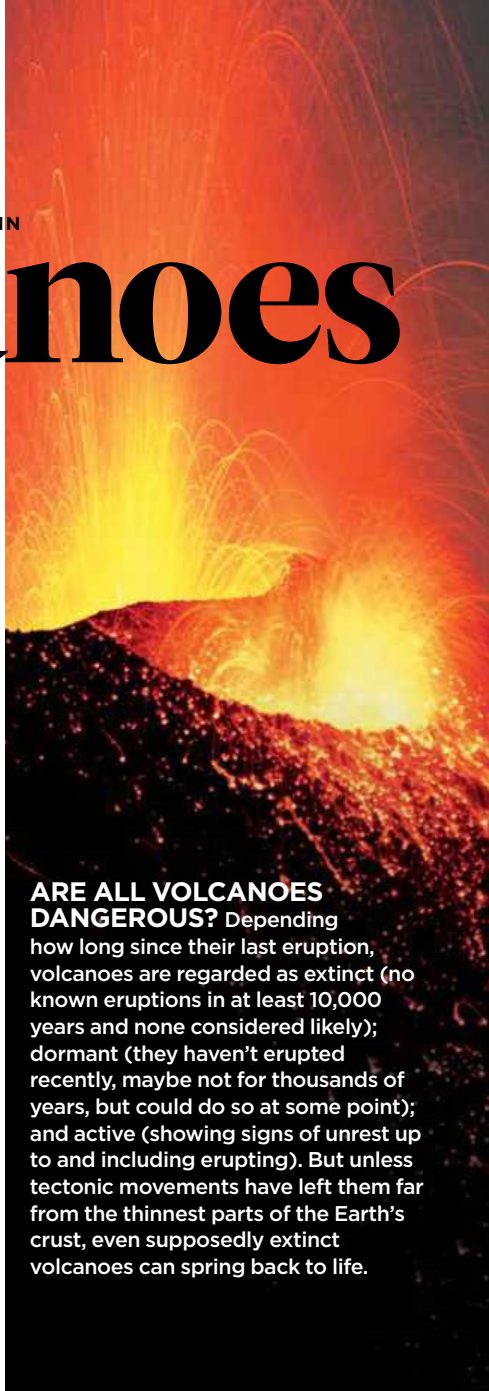
START AT THE BEGINNING

Steamy bathrooms have vents, well-made pie crusts have vents and our planet's surface has vents – we call them volcanoes.

TELL ME MORE We live on a thin crust of solid rock sitting atop a thick layer of much denser, flowing molten rock called magma. Big temperature variations (from 870°C to 2200°C) in the magma cause pressure to build up, pushing it upwards to the surface. Finding a weak spot it breaks through, relieving the pressure. This is easiest in the places where shifting tectonic plates meet, which is why most of the volcanoes we need to worry about are dotted around the 'Ring of Fire' bordering the Pacific Ocean. Of the global population at risk from volcanoes, 95% are in just seven countries: Indonesia, the Philippines, Japan, Mexico, Guatemala, Ethiopia and Italy.

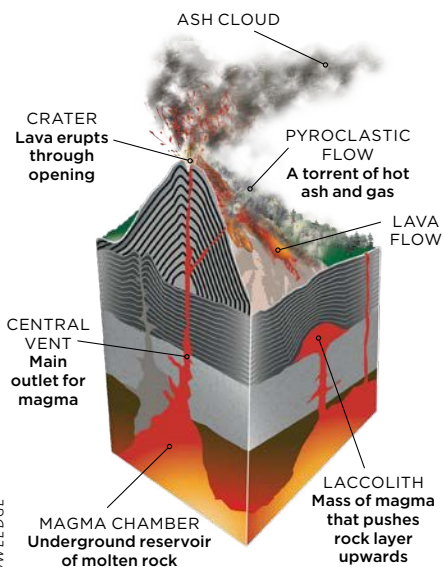


ARE ALL VOLCANOES DANGEROUS? Depending how long since their last eruption, volcanoes are regarded as extinct (no known eruptions in at least 10,000 years and none considered likely); dormant (they haven't erupted recently, maybe not for thousands of years, but could do so at some point); and active (showing signs of unrest up to and including erupting). But unless tectonic movements have left them far from the thinnest parts of the Earth's crust, even supposedly extinct volcanoes can spring back to life.





WHY DO THEY AFFECT PLANES? While travellers and airlines hate it, there are good reasons to ground planes if they're at risk from volcanic ash clouds, which can rise 30 km and travel more than 1500 km. Unlike normal clouds, ash clouds consist of minute glass particles and pulverised rock. If sucked into a plane engine these can melt and then solidify, causing numerous problems including potential engine failure. The US\$1.7 billion loss to the aviation industry from cancelling 100,000 flights after the 2010 eruption of Iceland's Eyjafjallajökull spurred efforts to develop better detection and avoidance systems.



“It is not possible to predict when or where the next eruption will take place. What is certain is that it will happen.”

MAGNÚS TUMI GUDMUNDSSON,
from Iceland's Institute of Earth Sciences

HOW MUCH DAMAGE CAN THEY DO?

A lot. The largest eruption of the past 500 years was Mount Tambora, Indonesia, in 1815. The eruption killed about 70,000 people; 90,000 more died from the catastrophic global cooling that followed.

BY THE NUMBERS

1000

Approximate number of volcanoes with the potential to erupt each year

50-70

Average number of eruptions annually

66%

of people whose lives are at risk from volcanoes live in Indonesia

US entrepreneur Jeff Bezos has built Amazon from a small online bookseller into a retail giant

The Man Who Sells Everything

BY GIDEON ROSE FROM FOREIGN AFFAIRS

AFTER GRADUATING from Princeton University in 1986 with a degree in electrical engineering and computer science, Jeff Bezos went to work on Wall Street. In 1994, he quit finance to try his hand as an entrepreneur. Amazon.com started as an online bookseller, selling its first copies in July 1995. In the years since, it has grown into a diversified retail giant, as well as a producer of consumer electronics, such as the Kindle, and a major provider of cloud-computing services. Following are edited excerpts from a conversation with Bezos.

When did you realise that Amazon would become the behemoth it is?

There were indications that we

were on to something from the very beginning. The original business plan contemplated only books and growing a relatively small company. But shortly after launching, we had already sold books in all 50 US states and 45 countries.

A couple of years after that, we sent an email message to about 1000 customers and asked, “Besides the things we sell today, what would you like to see us sell?” The answers came back so long-tailed [distant to the core business] – people said, “Windshield wiper blades for my car,” and so on. At that point we started to realise that perhaps we could sell a very wide selection of things using the methods that we had pioneered.

*Entrepreneurs
benefit greatly from
being willing to fail,
says Bezos, 52*



What are the crucial qualities that make for a successful entrepreneur?

One is that view of divine discontent: how can you make something better? Entrepreneurship and invention are pretty closely coupled. Inventors are always thinking, "I'm kind of inured to this, but just because I'm used to it doesn't mean it can't be improved."

Entrepreneurs also benefit greatly from being willing to fail, willing to experiment. Good entrepreneurs tend to be stubborn on the vision but flexible on the details. Another quality is passion for the mission. The very best products and services are always built by missionaries. Such people wake up in the morning thinking about that idea, and they're doing that as they close their eyes at night.

You've not only created Amazon but periodically reinvented it. What are the keys to running a large business in an entrepreneurial way?

A pioneering culture that rewards experimentation even as it embraces the fact that it is going to lead to failure – that is very important for larger companies. And a long-term orientation is a key part of that.

Some argue that Amazon does well by its customers but not so well for small businesses.

We are very empowering to certain small businesses. We have millions of small sellers who get access to our prime retail real estate and sell right alongside us. Kindle Direct Publishing is another self-service platform that has been incredibly empowering to authors who have never been able to get distribution before. Amazon Web Services, the cloud-computing division, has been a tremendous enabler of small businesses that use it to lower their data-centre costs and increase their nimbleness.

Do you think technology and innovation are moving forward to ever-greater heights?

The rates of change and innovation are not equal in all segments or sectors of the economy, but we are seeing a lot of innovation in certain sectors, and I expect that to continue. The great thing about ideas is that every new idea leads to two more. It's the opposite of a gold rush, where the more people who show up, the faster the gold runs out. Ideas are not like that; ideas breed. **R**

FOREIGN AFFAIRS (JANUARY 4, 2015) © 2015 BY COUNCIL ON FOREIGN RELATIONS.WWW.FOREIGNAFFAIRS.COM

**RIDDLE ME THIS**

Question: The man who made it doesn't want it. The man who bought it doesn't need it. The man who needs it doesn't know it.
What is it?

ANSWER: A COFFIN.

JOIN THE CONVERSATION

Four great reasons why you should join us online...

We give away cash and prizes

Join fun competitions and quizzes



First look at future issues

Get a sneak peek at upcoming stories and covers



We give great advice

Get regular home, health and food tips from The Digest



We must teach our children to dream with their eyes open.

HARRY EDWARDS



We help you get motivated

#QuotableQuotes and #PointstoPonder to get you through the day





VOYAGER OF THE SEAS

Be swept away to a world of luxury and indulgence on Southeast Asia's largest cruise ship, Royal Caribbean's *Voyager of the Seas*, coming to Singapore this May.

LOVE ROOM TO MOVE on your cruise? *Voyager of the Seas* is a Voyager class cruise ship, which represents the highest public space per guest ratio of any ship in the cruise market.

So you'll have plenty of room to unwind by the pool or jive on the dance floor, with 15 decks and nine pools and whirlpools. Dining options include a spectacular three-storey dining room; Chops Grille – Royal Caribbean's signature steakhouse; and the Italian-style Giovanni's Table.

Royal Caribbean has indulged even the most activity-hungry couples and families, with everything from the FlowRider surf stimulator, rock-climbing and ice-skating to mini-golf, basketball and tai chi.

Plus a whole lot more, including:

- Duty-free shopping along the Royal Promenade
- Vitality Spa with 100 treatments
- 13 bars, clubs, and lounges that never have a cover
- Broadway-style shows
- A Casino Royale with baccarat
- A poolside outdoor cinema
- Royal Caribbean's exclusive partnership with DreamWorks enables you to share memorable moments with your favourite characters from *Shrek*, *Kung Fu Panda*, *Madagascar* and other films. Activities comprise character dining and parades, 3D movies and photo opportunities.

Throw in all the usual features that Royal Caribbean is renowned for such as 24-hour room service, exceptional cuisine and innovative amenities for people of all ages – and you will have an unforgettable cruising experience.

For more information, visit www.royalcaribbean.com.sg. ●

Hurry for this great price!

Reader's digest

HOURS
OF
GREAT
READING

THE BIG ONE

THIS MEGAQUAKE
IS OVERDUE

PAGE 102

The Healing
Power of Hens

PAGE 28

10 Sleep Myths
Debunked

PAGE 15

Child Labour
Tobacco's Shame

PAGE 54

Smart Animals 8
All in a Day's Work 96
Word Power 125

Don't miss
out. Each issue
packed with
real-life drama,
laughs and
inspiring stories

Save

50%
OFF RETAIL

For more details, head to:

ASIA: rdasia.com/subscribe

AUSTRALIA: readersdigest.com.au/subscribe

NEW ZEALAND: readersdigest.co.nz/subscribe

Reader's digest



Explore, Interact, Inspire

Available now, everywhere

press reader



That's Outrageous!

SNAKING ALONG

BY LINDA BESNER

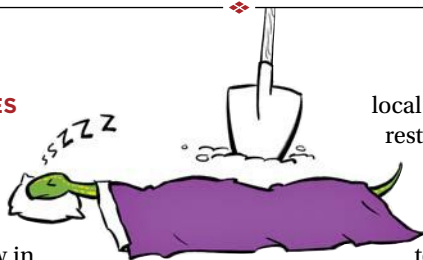
ARMY OF SCALES

In the beginning, there were 12.

In February last year, a construction crew in Delta (British Columbia, Canada) came across a dozen hibernating garter snakes. They called in a biologist, who brought the animals to a wildlife rescue centre. The next day, the crew found some more, and then some more... They had disturbed multiple underground serpent dens. Soon the wildlife centre was sheltering more than 500 garter snakes, varying in length from 10 to 60 cm. Staff kept the reptiles in tubs of cool, damp wood shavings, returning them to their hibernating homes once construction had ceased.

DOUBLE TROUBLE

Twice isn't always nice. On July 9, 2015, police and veterinarians in the east coast UK town of Guisborough, North Yorkshire, responded to calls about a 1.8 m boa constrictor spotted on a country lane. By day's end, they had caught the creature with the help of




local vets, and the town rested easy. But the peace didn't last. The next afternoon, police received more calls to the same lane, this

time about a 2.5 m Burmese python. The snakes, which had likely been abandoned by their owner, now live with an ecology teacher in Blackpool, on the UK's west coast.

NOW YOU SEE ME...

Last July, 70-year-old American Christine Jones required expert assistance with an unusual task – coaxing a serpent out of her car. When the resident of Tallahassee, Florida, discovered the 1.2 m oak snake menacing birds in her yard, she and her husband put it in a sack, intending to drive to a lake and set it free. But the bag – and their plan – had a hole, and the snake slithered out, vanishing under the car seats. The next morning, Jones drove to the fire station, where the scaly hitchhiker's tail was finally spotted under the dashboard. The fire lieutenant pulled it out, ending a truly horrifying game of hide-and-seek.



When a neighbour pulls an unconscious toddler from an icy stream, the little boy's family fears the worst. But one doctor won't give up hope

Boy in the Stream

BY DEREK BURNETT

*Gardell Martin,
age two, beside the
creek that nearly
took his life*



I T'S THE FIRST WARM DAY of spring 2015, and the March sun pours over the ridge that borders Doyle and Rose Martin's rural property outside Mifflinburg, Pennsylvania, US. Yesterday it rained all day, melting the better part of the long winter's snow, and what the rain left behind, the sun is taking care of today. Water seeps and trickles down the surrounding slopes, swelling the normally humble creeks until they nearly jump their banks. The stream that runs through the Martins' yard is usually ankle deep and lethargic, but today it courses angrily beneath the footbridge at startling speed, up to a man's waist and frigid.

The Martin boys will not squander such a lovely afternoon. After the school bus drops them off, they barge outside to ride bikes, gathering sticks to build a fire. They are what people in some circles call free-range kids; the Martins have eight, and in keeping with their own upbringings, Doyle and Rose expect their children to learn independence and responsibility, the older ones looking after the younger. Today, Gary, 11, and Greg, seven, are playing with little Gardell, who is not yet two. Doyle, a truck driver, is out on the road. Rose works in the kitchen, where she can frequently check on the boys through the window.

Suddenly Greg bursts through the door, his face streaked with tears. "I can't find Gardell!" he screams. "He was just with me!"

Rose and her two eldest, Gloria and Grace, charge outside, shouting Gardell's name. Just to make sure, they check the two outbuildings, but everybody is thinking about that raging stream. Rose call emergency services,

and the girls call their father. The property echoes with the family's frantic shouts for Gardell, as mother and children scramble along the banks of the brook, sickened by the speed of that icy grey water.

RANDALL BEACHEL is washing dishes at his kitchen sink when he looks idly out the window and sees Grace and Gary Martin running alongside the stream where it exits their property. Something's wrong. Grace is barefoot, no jacket. They're yelling. He steps outside. "What's wrong?" he calls to Gary.

"We can't find my little brother!"

Randall's heart sinks. He runs back inside, tells his wife, Melissa, what's going on, and pulls on his shoes. Together they rush outside and down the road to where the stream passes through pastureland some 200 metres downstream of the Martins' place. Randall holds the strands of electric fence wire, ignoring the shocks, as Melissa climbs through. When they

reach the brook, Melissa goes downstream and Randall begins following the brook back toward the Martins', scanning the water's surface. After a moment, he sees a tiny pair of navy-blue boots partially obscured by brush. A step or two farther, and he sees the whole picture: the little boy, still clad in a hooded snowsuit, hanging bizarrely on his side in the middle of that rushing stream, his face turned away from the current.

Randall plunges into the brook, gasping involuntarily – the water temperature is around 2°C – loses his footing, and blunders into a deep hole. Recovers himself. Pulls the limp little body off what turns out to be a grassy underwater knoll. Staggers back to dry land, shouting, “I found him!” even as he turns the kid over to see if he can drain the water from his mouth and lungs. An ambulance is coming up the road. Randall raises an arm, and it stops.

A paramedic races across the field. Randall hands the little boy over and stands watching as the rescuer rushes back towards the ambulance, performing CPR as he goes. When Randall reaches the road, the ambulance staff have torn off Gardell's clothes. One of the paramedics has placed a mask onto the little boy's face and is hand-pumping air into his lungs; the other is rhythmically compressing the tiny chest to force blood through the body. That's all Randall sees before

the vehicle turns around and speeds toward town. As for Rose, she never gets so much as a glimpse of her son.

The ambulance is taking him to Evangelical Community Hospital in nearby Lewisburg, she learns. Within minutes, her sister and brother-in-law arrive at the house, and together they speed toward the hospital. As



The CPR has gone on for over an hour. “If he survives, it will be a miracle,” says a paramedic

they rush into the emergency room 15 minutes later, Rose is told they're transporting Gardell by Life Flight to a trauma centre. Through the windows of the waiting area she can see the chopper on the heliport, its interior illuminated, medical workers hunched over what must be Gardell's body. Her brother-in-law is a paramedic, and he can tell they're still doing CPR in there – *after all this time!* – but he says nothing to Rose.

Mike Leshner, the paramedic who first carried Gardell to the ambulance, heads back to the station. The CPR has gone on for more than an hour; typically rescuers give up after less than half that time. “If he survives,” Leshner remarks, “it will be a miracle.”

A moment later, the helicopter lifts off. Rose watches through the window, tears stinging her eyes; she has missed her little one again.

DR FRANK MAFFEI is preparing for his evening rounds in the paediatric intensive care unit at Geisinger Medical Center's Janet Weis Children's Hospital in Danville, some 24 km from Lewisburg. He gets a call from the ER downstairs: toddler on his way via Life Flight, full cardiac arrest. Worse: CPR ongoing for more than an hour, to no avail. Not promising.

Still, Maffei and his colleagues leap into action. Upon Gardell's arrival, they run a breathing tube down the boy's throat, and four residents line up on his left side to continue CPR: two minutes of chest compressions, move to the back of the line. It's critical to get Gardell warmed up, so even as the limp little body jiggles and jolts under the force of the chest compressions, other doctors and nurses carefully insert an IV and two catheters to send warm fluids into his body, which is at only 25°C.

A resident turns to Maffei. "At what point are we going to stop?"

"We'll stop if we warm him to 32.2°C and he's still unresponsive," Maffei says.

"What about a pH?"

The resident is referring to the acidity of the blood, which spikes when a person stops breathing; a pH lower than 6.8 is considered incompatible with life.

Maffei hears himself answer, "6.5." It's an outrageous threshold. A few minutes later, the pH comes back at

6.54. No heartbeat, no breathing, and a low pH. The boy is dead.

Maffei has been doing this work for 25 years. Objectively, he knows that it's all over. Yet he can't shake some strange, subjective notion that Gardell is still in there. "Keep going," he says.

Now it's after 8pm, and Gardell remains unresponsive. The doctors move him to the operating room and prepare to put him on a heart bypass machine. They've got his temperature up to 28.3°C, but the machine will allow them to warm his blood externally and recirculate it, speeding the process. A surgeon stands scrubbed and ready to cut into the little boy's chest.

"Let's just do one more pulse check," Maffei says, laying his fingertips against Gardell's femoral artery. To his amazement, there is a pulse. His colleague Dr Rich Lambert checks the brachial artery – there is a strong pulse there. Excited, they monitor Gardell's pulse for more than an hour in the operating room, then transfer him to paediatric intensive care.

Maffei steps out into the waiting area to meet Rose. "Gardell's alive," he says. "However, we have to understand that he's alive after essentially being dead for an hour and 41 minutes." He needs to manage her expectations: Gardell's oxygen-starved brain will probably be forever damaged. It's anyone's guess as to when – or whether – he will wake up and what function he'll have when he does.

NOW IT'S THE SMALL HOURS of the morning. Doyle Martin has returned from the highways, and he and Rose are sitting over Gardell's bed. "Gardell," Doyle says as he always does when he reaches home, "I came back from trucking to play with you. Do you want to play?"

And to the eternal astonishment of all, the boy opens his eyes and turns his head toward his father – the boy who, eight hours ago, was dead.

Gardell stays in the hospital for two more days under light sedation. He's kept at a cool 32.2°C to prevent his brain tissue from swelling. He begins opening his eyes more frequently, obviously aware of his surroundings. The breathing tube is removed. He's weaned off the sedation. On the fourth day, a Sunday, he returns home. Within a week, he's playing with his siblings. "You'd never know anything happened," Rose says.

SO HOW DID A LITTLE BOY who, by every objective measure, was dead for nearly two hours come back to life unscathed? To the Martins and many others, Gardell's survival was simply a miracle. Rose points out that his pulse returned just as local church groups were meeting to pray on his behalf.

Physiologically, the key to Gardell's survival was the fact that he nearly drowned in ice water. "Hypothermia imparts a degree of protection from



"I never felt hopeless," says Dr Frank Maffei. "I thought, We've got a shot to save him"

the detrimental effects of low blood flow and low oxygen," Maffei says. The severe cold stopped Gardell's heart, but it also saved his brain, just as you might put an amputated finger on ice until you can reattach it. At a higher temperature, Gardell's brain cells would surely have died for lack of oxygen; as it was, they could wait – at least for an hour and 41 minutes. But no-one involved in the rescue has ever seen such an extreme case.

Randall Beachel, the neighbour who pulled Gardell from the stream, sometimes looks over at the Martin place and chuckles at the sight of the youngster kicking dirt around in the garden or chasing his brothers. It's simple to him, too. "It's truly a miracle," he says. "Truly a miracle." **R**



FIRST PERSON

*Lake Como, with its sole
island Comacina – the
perfect place for a time
of reflection*



The soothing shores of Italy's Lake Como was
the perfect place to celebrate our life together

BY LORENZO CARCATERRA

FROM NATIONAL GEOGRAPHIC TRAVELER

A Love Story

PHOTO: MASSIMO BASSANO

“**W**ATER IS GOD’S TRANQUILLISER,” Diana Vreeland, the legendary editor-in-chief of *Vogue* magazine, once said – words Susan cited regularly. If ever we needed tranquillity it was now, and Lake Como, ringed by quiet towns, elegant vacation villas and snow-crowned mountains, offered the perfect mix of scenery, culture – and views of God’s tranquilliser.

“This will be great,” I say as Susan and I make our plans. “Eat, look out at the lake, converse, look out at the lake, stroll, look out at the lake. By day two we’ll just look out at the lake – and be the most relaxed we’ve ever been.”

An hour’s drive north of Milan, Lake Como has seduced visitors since Roman times with its extravagant natural setting in the foothills of the Alps, temperate climate and, later, grand villas. I already knew we’d stay at perhaps the best known of these, the luxurious Villa d’Este.

Which is what we’re looking for as we pull into Cernobbio, a vintage resort town on Como’s southwestern shore. The lake, walled by steep mountain sides, glitters under an afternoon sun. We drive the Via Regina (‘queen’s way’) past the 19th-century Villa Erba and the town’s historic centre, and turn at the sign for the resort.

Before us, baronial buildings and pavilions – including the sumptuous main residence, built for a

16th-century cardinal – have arranged themselves along the lakefront, punctuated by gardens filled with palms, plane trees, cypresses and flowering plants. A whiff of camellias soon has us ambling curved walking paths in search of its source, the clear blue waters of Como to our right, embraced by sloping mountains thick with greenery.

I reach over and take my wife’s hand. She turns toward me and smiles, then gently rests her head against my shoulder.

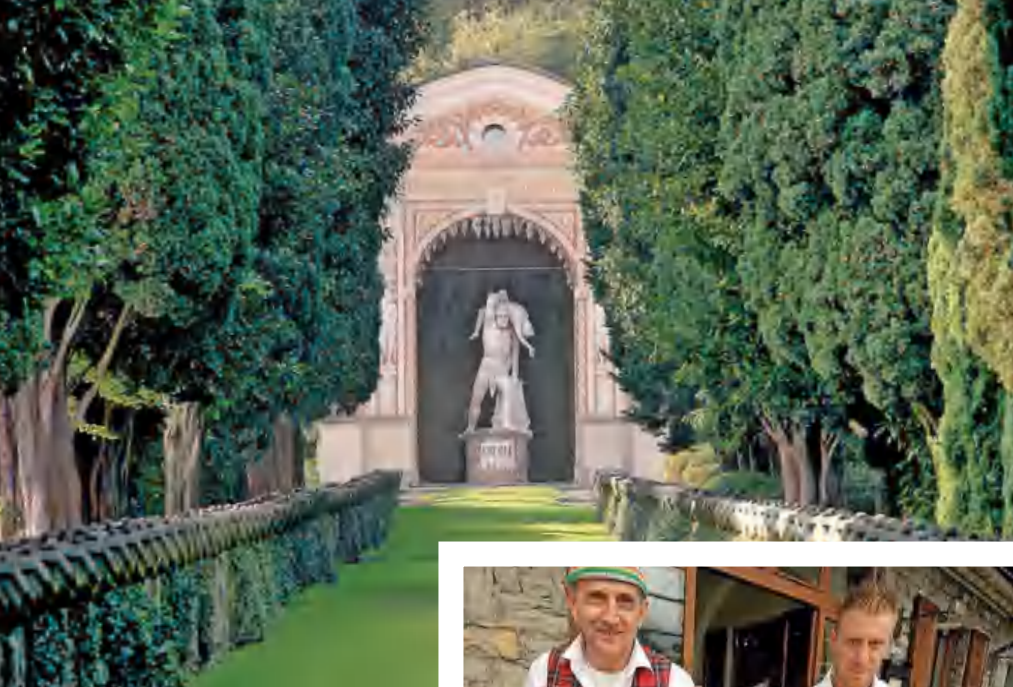
“This,” she purrs, “is the most peaceful place. I could stay forever.” I nod and hold her hand tightly.

For Susan, forever is just a few short months away.

We have been married for more than 30 years, raising two children in the process. We’ve had our ups and downs, interspersed with many glorious days and nights. Through it all, we’ve remained what we’d been from the very start – each other’s best friend. Susan’s illness – stage four

*Shops on Salita
Serbelloni in Bellagio,
with a view of the lake
in the distance*





A statue of Hercules (top) at the hotel Villa d'Este. At the Locanda dell'Isola Comacina restaurant (middle), owner Benvenuto Puricelli offers his special brew of coffee, sugar and brandy. The restaurant's offerings (left) are superlative

lung cancer – froze me. I withdrew, confused and angry. We had always valued honesty and used humour as a shield against any obstacle. But would either be enough to weather the severe storm she faced?

“Let’s take a trip,” Susan had said one morning, washing down a dozen pills with a smoothie. “I want to get one more trip in while I still can.”

“Where do you want to go?”

“Some place that can make me forget,” Susan said.

Is there a land of such supreme and perfect beauty anywhere? wondered 19th-century American poet Henry Wadsworth Longfellow after a visit to Lake Como. The area inspired Hungarian composer Franz Liszt to declare, “When you write the story of two happy lovers, let the story be set on the banks of Lake Como.”

And so we set our story here. Susan, of course, is determined to make the most of every moment.

We’ll walk the gardens at Villa Carlotta, north of Cernobbio in Tremezzo, where the lush plantings, marble sculptures and blooming flowers make us feel as if we’ve dropped into another century. We will dine at Il Gatto Nero (‘the black cat’), a mountaintop restaurant decorated with artworks of cats and boasting views of the lake that seem to extend to eternity. We’ll ride the boats that operate as buses, transporting locals and tourists from Varenna, midway up the lakeshore, west to Menaggio,

then south to Bellagio, ‘the pearl of Lake Como.’

In Lenno we taste locally grown Vanini olive oil, then continue to neighbouring Mezzegra, where we hike up the hillside for a view that will leave me as breathless as does the challenging ascent. We stop in Laglio, the lakefront town where US actor George Clooney owns a villa.

And we visit the island of Comacina, to dine at what some consider one of the best restaurants in Italy, the Locanda dell’Isola Comacina. As Susan and I board a small boat for the 400 metre crossing, I catch her up on Comacina’s history.

“Almost no-one set foot on the island from the 1100s to the 1940s,” I intone, “thanks to a curse imposed by the Bishop of Como.”

The restaurant fills the top floor of a two-storey villa overlooking the lake. We sip a crisp Soave Classico wine as we dine on owner Benvenuto Puricelli’s cooking: smoked ham, grilled trout, chicken baked in a woodstove, slabs of Parmigiano-Reggiano cheese. Then Puricelli emerges from the kitchen and proceeds to pour brandy and sugar into a large copper pot that has been filled with rich coffee, telling us that drinking his special brew is the only way to leave the island curse free.

Susan takes two sips. “It’s too strong for my taste. But good.”

“You’re going to finish it all, right?” I ask, having downed my portion.

She shakes her head.

"But you have to," I say. "Otherwise the curse will follow you off the island."

The early afternoon sun seems to hover over her shoulders, the deep-blue lake sparkling behind her. I realise how foolish I sound, jabbering about some curse to a dying woman. She turns, looks out on Lake Como, and is silent.

Finally she says, "I'm beyond the reach of any curse."

The towns along Como's shores have constituted one of the world's great silk centres since the 18th century, thanks to an abundant supply of water (needed to boil the silkworm cocoons for their silk fibres) and mulberry trees, which the silkworms feed on. Today Lake Como's silk works supply such high-end fashion houses as Versace, Ungaro and Hermès.

"Silk helped turn this region into a destination of choice for those in need of rest and relaxation," a frequent visitor from Milan tells us one afternoon. "These days, I suppose there is one man in particular to thank."

"Who?" I ask.

"Ralph Lauren. He bought the silk for his clothes here when he first started his business."

Century-old Como silk house, Mantero, frames its craft as 'weaving emotions'. Susan and I have just strolled past its headquarters and showroom

on Via Volta, in Lake Como's provincial capital, also called Como, a few minutes' drive south of Cernobbio. Through the windows we make out a shimmering rainbow of silk scarves, ties and shawls. I'm ready to step in when Susan spots one of Como's other gems, the 12th-century Basilica of San Fedele. Places that have stood the test of time now call to her.

"Come, let's go see what's inside," she says, tugging eagerly at my arm.

We enter the hushed space, lit by a rose window from the 1500s and arrayed with richly hued medieval frescoes. Relics of St Fidelis, a Roman soldier executed near here allegedly for helping to free Christian prisoners, are said to rest under the altar.

Susan turns to me. "I need to talk to you."

I follow her out to the piazza, an ancient locale dotted with ochre- and umber-coloured town houses.

"Let's sit for a bit," she says, pointing to a freshly painted wood bench.

Susan grabs my hand and rests it on her leg. "I need you to promise me something. Not for now, for after."

I take a deep breath and find it hard to form words; all I come up with is a nod.

"I want you to do the things you always talked about doing but never did," she says. "The house on a lake you wanted. Buying the vineyard that

will use up all your money. Just don't let too much time pass before you do. Each day is like a year, as I found out the hard way. And I want you to be happy, as I always have been."

"I don't want to do that without you," I say. "It won't mean the same."

"It will have to be without me," Susan tells me. "That decision has been made."

She leans against me and stares out at the lake. "Promise me that," she whispers. "It's one last promise."

I kiss the top of her head and close my eyes. "I promise," I whisper.

We sit on the bench until late afternoon, temporarily setting aside our fears and concerns yet bracing for the cold reality that soon we will have no choice but to face them all head-on.

Lake Como is the perfect place to visit when starting a new chapter in life – a new romance, a marriage – or simply to enjoy the company of someone with whom you've shared much.

It also, I'm discovering with some pain, is a loving place to say goodbye. Susan and I find ourselves often gazing at the lake, compelled by its shape-shifting waters, shading from an ocean indigo to a deeper midnight blue. We're at its shores at sun-up, warm cups of coffee in hand, watching the first waves cross its surface.

We make a point of being by it at sundown, when snow on the hill-sides seems to melt right into the lake as the landscape slowly descends into darkness.

We also walk and talk a lot, going over the life we have shared, smiling about the many good times, shaking our heads at the mistakes made along the way. Other than shortness of breath, Susan shows no sign of the war being waged inside her body. The lake seems to lift her spirits and put her mind at ease.

"This time will stay with me always," she murmurs one night, her voice soft. "People who live here are lucky to call it home. They wake to such a beautiful sight. It never leaves them."

I find myself wishing we'd rented one more boat and taken one more turn around the magical lake, tucked into one more meal at flower-adorned Ristorante Navedano, my wife happy with a glass of simple house wine and a bowl of soup. I long for one more stay at Villa d'Este. But we both know we have another journey ahead of us.

None of it matters as long as we are by this life-affirming lake. It is as if time has frozen for us. The woman I love will forever be next to me, staring at the still, blue waters, talking about her hopes for our children, the plans she wants to make – and the places on Lake Como she still wants to see. **R**

Noted music critic Susan Toepfer died on Christmas Eve, 2013, after a two-year battle with cancer. In June 2014, Lorenzo Carcaterra bought the lake house he had dreamed of owning. He thanks Susan for guiding him to it.

All in a Day's Work

HUMOUR ON THE JOB

SHHHHH!

Librarians may be shy, but their patrons aren't. Look at their oddball requests:

- A patron offered me \$100 to steal a cactus from somebody's yard.
- A patron wanted me to find a book to teach her dog German.
- A patron on his way to the casino asked to rub my red hair for luck.
- A patron once asked me for my home phone number so she could call me with reference questions when I wasn't at work.

Source: Roz Warren from womensvoicesforchange.org



DR WHOM

When my colleague answered his phone, the confused woman on the other end asked, "Who is this?"

"This is Steve. With whom did you wish to speak?"

After a pause, "Did you just say whom?"

"Yes, I did."

The woman replied, "I have the wrong number," and hung up.

Source: gcfl.net

WORKING BIG TO SMALL

I recently asked my fifth grade

students what they would do to make the world a better place. One said, "I'd make potato skins a main dish rather than an appetiser."

SUBMITTED BY
JESSICA CASTRONOVO

NOTHING BUT THE TRUTH

Testimony noted by me, a court reporter:

Question Now, to the best of your knowledge, did your internal bleeding stop?

Answer I hope so.

SUBMITTED BY DIANE MCELWEE



PUT A PIN IN IT

My husband is a golf instructor and he never fails to amuse me with some of the remarks his customers come up with. He asked one if she knew of a way that the game of golf could be improved.

She replied, "Well, I've always thought the holes are far too small."

SUBMITTED BY LEONA HEXMAN

CHECK THE BOX

A Twitter exchange between an angry customer and an apologetic staffer at a pizza takeaway:

Customer Yoooo. I ordered a pizza and it came with no topping on it or anything. It's just bread.

Pizza takeaway We're sorry to hear about this!

Customer [minutes later] Never mind, I opened the pizza upside down :\\

Seen on Twitter

RADIO SILENCE

Scene - a radio newsroom:

Caller I just wanted to let you know that you are off the air.

Host Yes, we know. The engineers are working on it.

Caller It would be nice if you put something on the air that says that.

Source: Overheard in a radio newsroom



"No, we haven't started yet. My hand was cold."

YOU'VE BEEN SERVED

Although renowned for its excellent food, our local restaurant is very miserly with its portions. Enjoying my usual Sunday lunch, I overheard the conversation at the next table.

"How did sir find the gammon?" asked the waiter.

"With no problem," said the chap. "I used to be a detective."

SUBMITTED BY JOE KILKER

CLIMB THAT CORPORATE LADDER

Personally, I think showing up to work late every day is a real power move.

@MONICANN86 ON TWITTER

👉 Got a good joke, anecdote or real-life gem to share? Send it in and you could win cash! See page 6 for details.



I GREW UP IN A TROUBLED HOME in the 1970s, on the outskirts of downtown Orlando, Florida. Our subdivision was one of many that backed up to a dwindling orange grove. One remnant farm, an island of pastureland with horses, a few cattle and an enormous garden, remained among the sea of housing estates. The home was an early-1900s Arts and Crafts three-storey with a great porch, complete with a swing. I loved that storybook house.

ILLUSTRATION: TATSURO KIUCHI



The next-door
neighbour invited me
over, and a new world
beckoned

THE CURIOUS WORLD OF Mrs Reese

BY HEATHER SELLERS

It was nothing like the one I lived in with my mother, a dark place with strict rules about befriending others. As in: don't. Never, ever talk to anyone, my mother said. She suffered from profound depression and paranoid delusions. Just getting through the day was a war for my mother.

Who lives on that utopian plot of

land next door? I wondered. Sometimes I glimpsed the father on a horse with a lasso. Sometimes I saw the two boys – dark curly hair – running around the land, chased by two border collies. I never saw the mother, but the whole operation looked like heaven, and I yearned to join that family.

One day, in sixth grade, a petite, raven-haired woman wearing ruby-red lipstick, gold eye shadow, and thick mascara was introduced to our class: Mrs Reese. Mrs Reese explained that she was starting Spanish Club. She invited anyone interested in learning Spanish language and culture to stay after school.

I could not take my eyes off her tortoiseshell bracelets, her sparkling aquamarine rings.

The bell rang, and to my shock, no-one went up to Mrs Reese. I was under a strict order to go straight home. But that day, I lingered. I finally asked Mrs Reese when the club started.

"We could begin right now if you like," she said.

She smiled with her eyes, as though we were in on a secret. I felt beautiful. I felt fluent in Spanish, fluent in everything. We met right there in the hallway, and that day she taught me this question: *¿Dónde está su casa?* That's when I learned that Mrs Reese lived in the mansion with the kids and the collies. The house of my dreams was her house. That day, I learned to answer questions about my age, my favourite food (*¡helado!* [ice-cream]), and the names of every *perro* [dog] I had known. And I learned: do you want to come over tomorrow after school for cooking lessons?

Sí, sí, sí. What is another word for yes? But my mother had been definitive. Never. We could not mix with the neighbours.

I harangued my mother all summer and into autumn, well after Spanish Club had dissolved. *I have been invited to that house. You have to let me go.* I

spoke as though my life depended on it. It did. I wept at night sometimes, worried that Mrs Reese and her cowboy husband and those two beautiful boys with the black curly hair would move away before I could get my cooking lesson. Before I could get inside.

At some point, I managed to wear my mother down, and one Saturday afternoon, I got on my

bike and rode out to the little farm. Fuchsia bougainvillea ran rampant around the porch. There was a bronze door knocker. Mrs Reese opened the door grandly and ushered me in.

We had tea on her red velvet sofa. She painted my toenails crimson. She showed me how to water the African violets that lived in clusters in nearly every room. The details of that afternoon are etched in my mind: we made guacamole and then a garlicky picadillo [mince with tomatoes]. I carefully wrote out the recipes, making notes as she explained the steps. *You can't have too much garlic.*

“YOU SMELL
DIFFERENT,”
SHE SAID,
EYEING ME
SUSPICIOUSLY.
I AM
DIFFERENT. I’M
COMPLETELY
DIFFERENT

We spoke in Spanish. In Spanish, my voice was loud, romantic, assertive. *This is the real me!* I remember thinking.

Mr Reese pulled onto the property in a gigantic blue Ford truck and went straight to the barn. Ty, who was in my class at school, came in from playing outside. Mrs Reese put one hand on top of his head – those gorgeous black curls, those wild blue eyes. She put her other hand, all those sparkling rings – on my back. She pressed us towards each other. *Mi novia, mi novio*. It was alarming. And thrilling.

Ty ran up to the attic – three flights. Mrs Reese encouraged me to follow. She nodded, serious, vibrant, as though saying, *Step into your life*. But it wasn't quite right. I did not want to kiss a boy; I wanted to bake *dulces* [sweets].

When I got home, I announced to my mother that we had to get the ingredients for picadillo immediately. "You smell different," she said, eyeing me suspiciously. I am

different. I am completely different.

She said no. "You know I can't have garlic in the house." She hated the smell. I felt hurt, proud, disloyal and brilliant, all at once, when I told my mother, "Mrs Reese doubles the garlic." My toenails, secret jewels, sparkled in my sneakers.

I knew I'd always have garlic in my house. I knew I'd paint my nails the deepest, bloodiest red, first chance I got. I knew I'd learn to dance, become fluent in Spanish.

For Christmas, Ty gave me a silver necklace from their family trip to Colombia, slipping it to me at school.

My mother never permitted me another visit to Mrs Reese's house, and I saw her only occasionally from a distance, hanging laundry on the line or sweeping their front porch. But four decades and countless moves later, I still have the necklace: a little silver man, carved with strange symbols, a talisman from the life she showed me, proof of a possible future. **R**

*
* *

NEWSPAPER CORRECTIONS

We all make mistakes, but sometime a publications has to do its best to be straight-faced after a real howler.

"Friday's *Argus* featured a 'Your Interview' with Richard Robinson. We would like to clarify that the quote, 'I have become increasingly convinced that we are heading for a disastrous confrontation and that the 21st century will be remembered for a terrible war between mankind and goats,' was a reader statement and not a response from Mr Robinson." BUZZFEED, *THE ARGUS*





The Big One

It's past due. Are we ready?

BY KATHRYN SCHULZ FROM THE *NEW YORKER*

WHEN THE 2011 EARTHQUAKE and tsunami struck Tohoku, Japan, Chris Goldfinger was 320 km away, in the city of Kashiwa, at an international meeting on seismology. As the shaking started, everyone in the room began to laugh. Earthquakes are common in Japan – that one was the third of the week – and the participants were, after all, at a seismology conference. Then everyone in the room checked the time.

PHOTO: ADAM VOORHES

SEISMOLOGISTS know that how long an earthquake lasts is a decent proxy for its magnitude. The 1989 earthquake in Loma Prieta, California, which killed 63 people and caused six billion dollars' worth of damage, lasted about 15 seconds and had a magnitude of 6.9. A 30-second earthquake generally has a magnitude in the mid-sevens. A minute-long quake is in the high sevens, a two-minute quake has entered the eights, and a three-minute quake is in the high eights. By four minutes, an earthquake has hit magnitude 9.0.

The earthquake was not particularly strong. Then it ticked past the 60-second mark, making it longer than the others that week. The shaking intensified.

At a minute and a half, everyone in the room got up and went outside.

It was March. There was a chill in the air and snow flurries but no snow on the ground. The earth snapped and popped and rippled. *It was*, Goldfinger thought, *like driving through rocky terrain in a vehicle with no shocks, if both the vehicle and the terrain were also on a raft in high seas.*

The quake passed the two-minute mark. The flagpole atop the building that he and his colleagues had just vacated was whipping through an arc of 40 degrees. The building itself was base-isolated, a seismic-safety technology in which the body of a structure rests on moveable bearings rather than directly on its foundation.

Goldfinger lurched over to take a look. The base was lurching, too, back and forth 30 cm at a time, digging a trench in the yard. His watch swept past the three-minute mark and kept going.

For decades, seismologists had believed that Japan could not experience an earthquake stronger than magnitude 8.4. In 2005, however, at a conference in Hokudan, a Japanese geologist named Yasutaka Ikeda had argued that the nation should expect a magnitude 9.0 in the near future – with catastrophic consequences because Japan's famous earthquake and tsunami preparedness was based on incorrect science. Now, Goldfinger realised as the shaking hit the four-minute mark, the planet was proving the Japanese Cassandra right.

For a moment, that was pretty cool: a real-time revolution in earthquake science. Almost immediately, though, it became extremely uncool because Goldfinger and every other seismologist in Kashiwa knew what was coming.

One of them pulled out a mobile phone and started streaming videos from the Japanese broadcasting station NHK, shot by helicopters that had flown out to sea soon after the shaking started. Thirty minutes after Goldfinger first stepped outside, he watched the tsunami roll in, in real time, on a tiny screen.

In the end, the magnitude 9.0 Tohoku earthquake and subsequent tsunami killed more than



When the next full-margin rupture happens, the Pacific Northwest will suffer the worst disaster in the history of North America

18,000 people, devastated northeast Japan, triggered the meltdown at the Fukushima power plant, and cost an estimated \$220 billion. The shaking earlier in the week turned out to be the foreshocks of the largest earthquake in the nation's recorded history. But for Chris Goldfinger, a paleoseismologist at Oregon State University and one of the world's leading experts on a little-known fault line, the main quake was itself a kind of foreshock: a preview of another earthquake still to come.

The Coming Quake

MOST PEOPLE in the United States know just one fault line by name: the San Andreas, which runs nearly the length of California and is perpetually rumoured to be on the verge of unleashing 'the big one'. That rumour is misleading, no matter what the San Andreas ever does. Every fault line has an upper limit to its potency, determined by its length and width and by how far it can slip. For the San Andreas, that upper limit is roughly an 8.2 – a powerful earthquake but, because the Richter scale is logarithmic, only 6% as strong as the 2011 event in Japan.

Just north of the San Andreas, however, lies another fault line. Known as

the Cascadia subduction zone, it runs for 1130 km off the coast of the Pacific Northwest, beginning near Cape Mendocino, California, continuing along Oregon and Washington, and terminating around Vancouver Island, Canada. The *Cascadia* part of its name comes from the Cascade Range, a chain of volcanic mountains that follows the same course 150 km or so inland. The *subduction zone* part refers to a region of the planet where one tectonic plate is sliding underneath (subducting) another. Tectonic plates are those slabs of mantle and crust that, in their epochs-long drift, rearrange the Earth's continents and oceans.

Take your hands and hold them palms down, middle fingertips touching. Your right hand represents the North American tectonic plate, which bears on its back the entire continent. Your left hand represents an oceanic plate called Juan de Fuca, some 23,000 km² in size. The place where they meet is the Cascadia subduction zone. Now slide your left hand under your right one. That is what the Juan de Fuca plate is doing: slipping steadily beneath North America. When you try it, your right hand will slide up your left arm, as if you were pushing up your sleeve. That is what North America is not doing. It is stuck,



By the time the shaking has ceased and the 1100 km tsunami has receded, the region will be unrecognisable

wedged tight against the surface of the other plate.

Curl your right knuckles up so that they point towards the ceiling. Under pressure from Juan de Fuca, the stuck edge of North America is bulging upward and compressing eastward, at the rate of, respectively, 3-4 mm and 30-40 mm a year. It can do so for quite some time. But it cannot do so indefinitely. There is a backstop – the craton, that ancient unbudgeable mass at the centre of the continent – and, sooner or later, North America will rebound like a spring. If only the southern part of the Cascadia subduction zone gives way – your first two fingers, say – the magnitude of the resulting quake will be somewhere from 8.0 to 8.6. That's the big one. If the entire zone gives way at once, an event that seismologists call a full-margin rupture, the magnitude will be somewhere from 8.7 to 9.2. That's the very big one.

Flick your right fingers outwards, forcefully, so that your hand flattens back down again. When the next very big earthquake hits, the northwest edge of the continent, from California to Canada and the continental shelf to the Cascades, will drop by as much as 1.8 m and rebound 10-30 m to the west. Some of that shift will take place

beneath the ocean, displacing a colossal quantity of sea water. The water will surge upwards into a huge hill, then promptly collapse. One side will rush west, towards Japan. The other side will rush east, in a 1100 km liquid wall that will reach the Northwest coast, on average, 15 minutes after the earthquake begins. By the time the shaking has ceased and the tsunami has receded, the region will be unrecognisable. Kenneth Murphy, who directs the Federal Emergency Management Agency (FEMA) Region X, the division responsible for Oregon, Washington, Idaho, and Alaska, says, "Our operating assumption is that everything west of Interstate 5 will be toast."

In the Pacific Northwest, the area of impact will cover some 360,000 km², including Seattle, Tacoma, Portland, Eugene, Salem, Olympia, and some seven million people. When the next full-margin rupture happens, that region will suffer the worst natural disaster in the history of North America. Roughly 3000 people died in San Francisco's 1906 earthquake. Almost 2000 died in Hurricane Katrina. FEMA projects that nearly 13,000 people will die in the Cascadia earthquake and tsunami. Another 27,000 will be injured, and the agency expects it will need to provide shelter for a

million displaced people and food and water for another 2.5 million. "This is one time that I'm hoping all the science is wrong, and it won't happen for another thousand years," Murphy says.

In fact, the science is robust, and one of the chief scientists behind it is Chris Goldfinger. Thanks to work done by him and his colleagues, we now know that the odds of the big Cascadia earthquake happening in the next 50 years are roughly one in three. The odds of the very big one are roughly one in ten. Even those numbers do not fully reflect the danger – or, more to the point, how unprepared the Pacific Northwest is to face it. Forty-five years ago, no-one even knew the Cascadia subduction zone existed, and its discovery stands as one of the greatest scientific detective stories of our time.

Reading the Trees

ALMOST ALL THE world's most powerful earthquakes occur in the Ring of Fire, the volcanically and seismically volatile swathe of the Pacific that runs from New Zealand up through Indonesia and Japan, across the ocean to Alaska, and down the west coast of the Americas to Chile. The Ring of Fire, it turns out, is really a ring of subduction zones. Nearly all the earthquakes in the region are caused by continental plates getting stuck on oceanic plates – as North America is stuck on Juan de Fuca – and then getting abruptly

unstuck. And nearly all the volcanoes are caused by the oceanic plates sliding deep beneath the continental ones.

The Pacific Northwest sits squarely within the Ring of Fire. Off its coast, an oceanic plate is slipping beneath a continental one. Inland, the Cascade volcanoes mark the line where, far below, the Juan de Fuca plate is heating up and melting everything above it. In other words, the Cascadia subduction zone has, as Goldfinger put it, "all the right anatomical parts". Yet not once in recorded history has it caused a major earthquake – or any quake to speak of. By contrast, other subduction zones produce major earthquakes occasionally and minor ones all the time. The question facing geologists was whether the Cascadia subduction zone had ever broken its eerie silence.

In the late 1980s, Brian Atwater, a geologist with the US Geological Survey, and postgraduate student David Yamaguchi found the answer – and a major clue in the Cascadia puzzle. Their discovery is best illustrated in a place called the ghost forest, a grove of western red cedars on the banks of the Copalis River, near the Washington coast. The cedars are spread out across a salt marsh on a northern bend in the river, long dead but still standing. Leafless, branchless, barkless, they are reduced to their trunks and worn to a smooth silver grey.

It had long been assumed that they died slowly, as the sea level around



A view of two earthquake-induced phenomena. The 2011 tsunami in Japan (above) was triggered by a 9.0 earthquake. Washington's ghost forest (right) resulted from a rupture in 1700



them gradually rose. But by 1987, Atwater, who had found in soil layers evidence of sudden land subsidence along the Washington coast, suspected that that was backwards – that the trees had died quickly when the ground beneath them plummeted. To find out, he teamed up with Yamaguchi, a specialist in dendrochronology, the study of growth-ring patterns in trees. Yamaguchi took samples of the cedars and found that they had died simultaneously: in tree after tree, the final rings dated to the summer of 1699. Since trees do not grow in the winter, he and Atwater concluded that

sometime from August 1699 to May 1700, an earthquake had caused the land to drop and killed the cedars. That time frame predated the written history of the Pacific Northwest – and so, by rights, the detective story should have ended there.

But it did not. If you travel 8000 km due west from the ghost forest, you reach the northeast coast of Japan. That coast is vulnerable to tsunamis, and the Japanese have kept track of them since at least 599CE.

One incident has long stood out for its strangeness. On the eighth day of the 12th month of the 12th year of the Genroku era, a 950 km-long wave struck the coast, levelling homes, breaching a castle moat, and causing an accident at sea. The Japanese understood that tsunamis were the result of earthquakes, yet no-one felt the ground shake before the Genroku event. When scientists began studying it, they called it an orphan tsunami.

Finally, in a 1996 article in *Nature*, a seismologist named Kenji Satake and three colleagues, drawing on the work of Atwater and Yamaguchi, matched that orphan to its parent. At approximately nine at night on January 26, 1700, a magnitude 9.0 earthquake struck the Pacific Northwest, causing sudden land subsidence and, out in the ocean, lifting up a wave half the length of the continent. It took roughly 15 minutes for the eastern half of that wave to strike the Northwest coast. It took ten hours for the other half to cross the ocean. It reached Japan on January 27, 1700: by the local calendar, the eighth day of the 12th month of the 12th year of Genroku. Once scientists had reconstructed the 1700 earthquake, certain previously overlooked accounts also came to seem like clues.

The reconstruction of the Cascadia earthquake of 1700 is one of those rare natural puzzles whose pieces fit together as tectonic plates do not: perfectly. It is wonderful science. It was wonderful for science. And it

was terrible news for the millions of inhabitants of the Pacific Northwest. As Goldfinger put it, "In the late '80s and early '90s, the paradigm shifted to 'uh-oh.'"

When the Dogs Bark

GOLDFINGER TOLD ME this in his lab at Oregon State. Inside the lab is a walk-in freezer. Inside the freezer are floor-to-ceiling racks filled with cryptically labelled tubes, 10 cm in diameter and 1.5 m long. Each tube contains a core sample of the sea floor. During subduction-zone earthquakes, torrents of land rush off the continental slope, leaving a permanent deposit on the bottom of the ocean. By counting the number and the size of deposits in each sample, then comparing their extent and consistency along the length of the Cascadia subduction zone, Goldfinger and his colleagues were able to determine how much of the zone has ruptured, how often and how drastically.

Thanks to that work, we now know that the Pacific Northwest has experienced 41 subduction-zone earthquakes in the past 10,000 years. If you divide 10,000 by 41, you get about 243, which is Cascadia's recurrence interval: the average amount of time that elapses between earthquakes. That time span is dangerous both because it is too long – long enough for us to unwittingly build an entire civilisation on top of our continent's worst fault line – and because it is not long

enough. Counting from the earthquake of 1700, we are now 315 years into a 243-year cycle.

It is possible to quibble with that number. Recurrence intervals are averages, and averages are tricky: ten is the average of nine and 11 but also of 18 and two. It is not possible, however, to dispute the scale of the problem. The devastation in Japan in 2011 was the result of a discrepancy between what the best science predicted and what the region was prepared to withstand. The same will hold true in the Pacific Northwest – but here the discrepancy is enormous.

The first sign that an epic Cascadia earthquake has begun will be a compressional wave, radiating outwards from the fault line. Compressional waves are fast-moving, high-frequency waves, audible to dogs and certain other animals but experienced by humans only as a sudden jolt. They are not very harmful, but they are potentially very useful, since they travel fast enough to be detected by sensors 30-90 seconds ahead of other seismic waves. That is enough time for earthquake early-warning systems, such as those in use throughout Japan, to automatically perform a variety of lifesaving functions: shutting down railways and power plants and triggering alarms so that the public can take cover. The Pacific Northwest has no early-warning system. When the Cascadia earthquake begins, there will be, instead, a cacophony of barking

dogs and a long, suspended, *what-was-that?* moment before the surface waves arrive. Surface waves are slower, lower-frequency waves that move the ground both up and down and side to side: the shaking, starting in earnest.

Soon after that shaking begins, the electrical grid will fail, probably everywhere west of the Cascades and possibly well beyond. In theory, those who are at home should be safest; it is easy and relatively inexpensive to seismically safeguard a private dwelling. But most people in the Pacific Northwest have not done so. Anything indoors and unsecured will lurch across the floor or come crashing down. Refrigerators will walk out of kitchens, unplugging themselves and toppling over. Water heaters will fall and smash interior gas lines. Houses that are not bolted to their foundations will slide off – or, rather, they will stay put, obeying inertia, while the foundations jolt westwards.

Other, larger structures will also start to fail. Ian Madin, who directs the Oregon Department of Geology and Mineral Industries (DOGAMI), estimates that 75% of all structures in the state are not designed to withstand a major Cascadia quake. FEMA calculates that, across the region, something in the order of a million buildings – more than 3000 of them schools – will collapse or be compromised in the earthquake. So will half of all highway bridges, 15 of the 17 bridges spanning Portland's two rivers, and two-thirds of



Among natural disasters, tsunamis are close to unsurvivable. The only likely way to outlive one is not to be there when it happens

railways and airports; also, one-third of all fire stations, half of all police stations, and two-thirds of all hospitals.

The shaking from the Cascadia quake will set off landslides throughout the region – up to 30,000 of them in Seattle alone, the city's emergency-management office estimates. It will also induce a process called liquefaction, whereby seemingly solid ground starts behaving like a liquid, to the detriment of anything on top of it. Fifteen per cent of Seattle is built on liquefiable land, including 17 day-care centres and the homes of some 34,500 people. So is Oregon's critical energy-infrastructure hub, a 10 km stretch of Portland through which flows 90% of the state's liquid fuel and that houses everything from electrical substations to natural gas terminals. The sloshing, sliding and shaking will trigger fires, flooding, pipe failures, dam breaches and hazardous-material spills. Four to six minutes after the dogs start barking, the shaking will subside. For another few minutes, the region, upended, will continue to fall apart on its own. Then the wave will arrive, and the real destruction will begin.

Among natural disasters, tsunamis may be the closest to being unsurvivable. The only likely way to outlive one is not to be there when it happens: to

steer clear of the vulnerable area or get yourself to high ground as fast as possible. For the 71,000 people who live in Cascadia's inundation zone, that will mean evacuating in the narrow window after one disaster ends and before another begins. They will be notified to do so only by the earthquake itself – “a vibrate-alert system,” Kevin Cupples, the city planner for the town of Seaside, Oregon, jokes. Depending on location, they will have ten to 30 minutes to get out. That timeline does not allow for finding a torch, hesitating amid the ruins of a home, searching for loved ones. “When that tsunami is coming, you run,” says Jay Wilson, chair of the Oregon Seismic Safety Policy Advisory Commission (OSSPAC). “You protect yourself, you don't turn around, you don't go back to save anybody. You run for your life.”

What Can We Do?

THE TIME TO SAVE people from a tsunami is before it happens, but the region has not yet taken serious steps towards doing so. Hotels and businesses are not required to post evacuation routes or to provide employees with evacuation training. These lax safety policies guarantee that many people inside the inundation zone will not get out. Twenty-two



"When that tsunami is coming, you run. You don't turn around, you don't go back to save anybody. You run for your life"

per cent of Oregon's coastal population is 65 or older. Twenty-nine per cent of the state's population is disabled, and that figure rises in many coastal counties. "We can't save them," Kevin Cupples says. "I'm not going to sugar-coat it and say, 'Oh, yeah, we'll go around and check on the elderly.' No. We won't."

Those who cannot get out of the inundation zone under their own power will quickly be overtaken by a greater one. A grown man is knocked over by ankle-deep water moving at 10.7 km/h. The tsunami will be moving more than twice that fast. Its height will vary with the contours of the coast, from 6 m to more than 30 m. It will look like the whole ocean, elevated, overtaking land. Nor will it be made only of water – not once it reaches the shore. It will be a five-storey deluge of pickup trucks and door frames and cinder blocks and fishing boats and utility poles and everything else that once constituted the coastal towns of the Pacific Northwest.

The inundation zone in a full-margin rupture will be scoured of structures from California to Canada. The earthquake will have wreaked its worst havoc west of the Cascades but caused damage as far away as Sacramento, California. FEMA expects to coordinate search-and-rescue operations

across 160,000 km and in the waters off 700 km of coastline.

OSSPAC estimates that in the Interstate 5 corridor, it will take one to three months after the earthquake to restore electricity, a month to a year to restore drinking water and sewerage service, six months to a year to restore major highways, and 18 months to restore health-care facilities. On the coast, those numbers go up. Whoever stays there will spend three to six months without electricity, one to three years without drinking water and sewerage systems, and three or more years without hospitals. How much all of this will cost is anyone's guess. But whatever the ultimate figure, the economy of the Pacific Northwest will collapse.

On the face of it, earthquakes seem to present us with problems of space: the way we live along fault lines, in brick buildings, in homes made valuable by their proximity to the sea. But, covertly, they also present us with problems of time. The Earth is 4.5 billion years old, but we are a young species, with an average individual allotment of three-score years and ten. The brevity of our lives breeds a kind of ignorance of or an indifference to those planetary gears, which turn more slowly than our own.

This problem is bidirectional. The Cascadia subduction zone remained

hidden from us for so long because we could not see deeply enough into the past. It poses a danger to us today because we have not thought deeply enough about the future. Where we stumble is in conjuring up grim futures in a way that helps to avert them.

The School in the Zone

THE LAST PERSON I met with in the Pacific Northwest was Doug Dougherty, the superintendent of schools for Seaside, which lies almost entirely within the tsunami inundation zone. Of the four schools that he oversees, with a total student population of 1600, one is relatively safe. The others sit 1.5-5 m above sea level. When the tsunami comes, they will be as much as 14 m below it.

In 2009, Dougherty told me, he found land for sale outside the inundation zone and proposed building a new K-12 campus there. Four years later, to

foot the \$128 million bill, the district put up a bond measure. The measure failed by 62%. Dougherty tried seeking help from Oregon's congressional delegation but came up empty. The state makes money available for seismic upgrades, but buildings within the inundation zone cannot apply. At present, all Dougherty can do is make sure that his students know how to evacuate.

Some of them, however, will not be able to do so. At an elementary school in the community of Gearhart, the children will be trapped. "They can't make it out from that school," Dougherty said. "They have no place to go." On one side lies the ocean; on the other, a wide, roadless bog. When the tsunami comes, the only place to go in Gearhart is a small ridge just behind the school. At its tallest, it is 14 m high – lower than the expected wave in a full-margin earthquake. For now, the route to the ridge is marked by signs that say *Temporary Tsunami Assembly Area*. I asked Dougherty about the state's long-range plan. "There is no long-range plan," he said.

Dougherty's office is deep inside the inundation zone, a few blocks from the beach. About 130 km further out, 3000 m below the surface of the sea, the hand of a geological clock is somewhere in its slow sweep. All across the region, seismologists are looking at their watches, wondering how long we have, and what we will do, before geological time catches up to our own. **R**

Puzzle Answers *See page 122*

SECRET SEQUENCE

C. The number of symbols above each square multiplied by the number of symbols below it produces the number of symbols inside that square. Also, the symbol used on the inside of each square is always above and below the next square.

ARITHMERIDDLE

$\{3 + 5 + 5\} - \{12 \div 3\} - 9 = 0$

HIDDEN MEANING

A. A near miss

B. Hi there **C.** Neither here nor there **D.** A break in the clouds

PYRAMID SCHEME

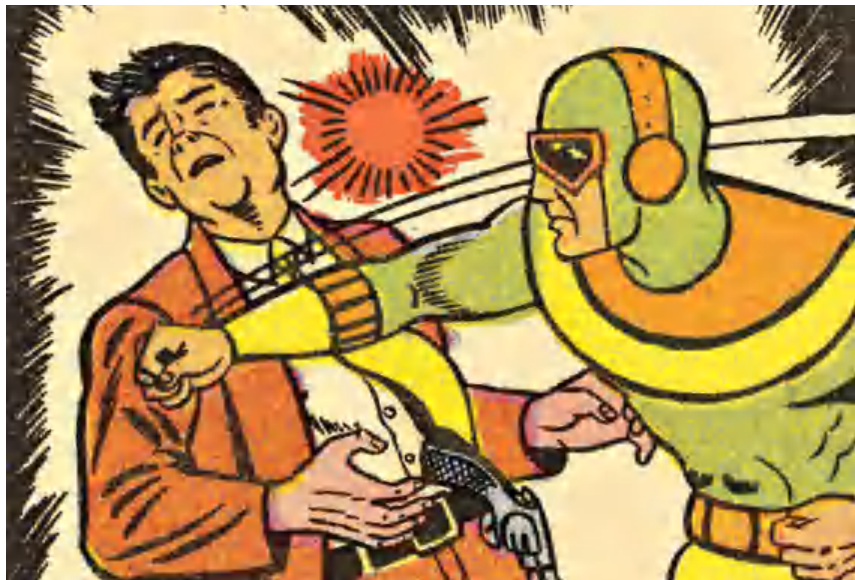
11. The numerals represent the number of distinct triangles in each figure. Note that each triangle can be made up of smaller segments, including smaller triangles.

COURTESY OF THE AUTHOR. ORIGINALLY PUBLISHED IN THE *NEW YORKER* (JUNE 20, 2015), NEWYORKER.COM.



Unbelievable

TRUE TALES SUPERSIZED



My Secret Life as a Superhero

Nury Vittachi finds that it's not easy turning green



I STARTED WEARING my daughter's Red Riding Hood cape when jogging at night to make the neighbourhood feel safer.

It doesn't seem to be working. Guess the neighbours aren't comic-book fans. Oh, well.

In related news, I was told that a

man who was arrested for disturbing the peace warned police that when he gets stressed he 'turns into the Hulk' but without the whole skin turning green thing. The news item, from South Carolina in the US, was sent to me by reader Pamela Yap, who commented: "If you think about it, surely all of us, when stressed, turn

ILLUSTRATION: GETTY IMAGES

into the Hulk but without the skin turning green thing?”

True. I know an elegant lady of mountain-like peacefulness who morphs into Shiva Destroyer of Worlds when placed behind a steering wheel. (I always ask her for a ride when I need to get somewhere faster than legally possible.)

I would have thought no more about this except that a colleague wondered aloud whether *The Incredible Hulk* comic book might be based on medical science. “Shakespeare talks about ‘the green sickness’ and there was a famous legend about two green children in the UK,” she said. This was clearly rubbish, but a quick call to a doctor friend to back me up produced a surprise answer. Your skin turns greenish if you have a dietary condition called hypochromic anaemia, he said. And Google revealed that ‘the green children of Woolpit’ were emerald-skinned youngsters found in England in the 1100s. One supposes they may have had the aforementioned ailment, or, if you want to be a bit more scientific about it, they could have been aliens visiting from a distant galaxy.

As a parent, my mind immediately turned to thoughts of experiments I could do on my children, so I called

the doctor back to ask what foods would turn their skin green. (It’s fun to surprise their mother.)

“The only way to turn a really bright green would be to consume food colouring and then induce sepsis, or multiple organ failure, so the food dyes are absorbed into your skin,” he said. “You’d be a lovely

shade of green, but on the downside, you’d be dead. And if you print my name with this advice, you’ll be dead sooner.”

Clearly this is not something a minimally responsible father (or even me) would do to his children. But it does strike me as an exciting way for me to shuffle off this mortal coil when

the time comes.

A quick note to my family physician should do it: “Dear Doc, when I am on the way out and my organs are failing, kindly feed me green food colouring. Then make the following announcement to my family gathered around my deathbed: ‘By the way, your dad was an alien from Alpha Centauri and will revert to his former appearance as his life ebbs away.’”

As my skin turns bright green, I can imagine the cries of “I knew it!” I can hardly wait.

Nury Vittachi is a Hong Kong-based author. Read his blog at Mrjam.org

“

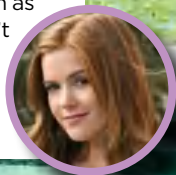
***If you want to be
a bit more
scientific about
it, they could
have been aliens
visiting from a
distant galaxy***

”

MOVIE DIGEST

KEEPING UP WITH THE JONESES *Comedy*

A suburban cul-de-sac is turned upside down when an unfulfilled married couple get caught up in an international espionage plot after they discover that their charismatic new neighbours are government spies. Starring Zach Galifianakis and Isla Fisher (below right) as the neighbours and Jon Hamm as the spy (right), this film doesn't require a lot of thought, but it does deliver a few laughs about neighbours getting along (or otherwise).



MISS PEREGRINE'S HOME FOR PECULIAR CHILDREN *Adventure, Family Fantasy*

From the genius of Tim Burton and based on the best-selling novel by Ransom Riggs comes this fabulous film. Young Jacob, following the clues left to him by his grandfather, discovers a mysterious island where he discovers the crumbling ruins of Miss Peregrine's Home for Peculiar Children. As Jacob explores the abandoned bedrooms and hallways, he discovers that the former occupants were far more than peculiar – they possessed incredible powers. And best of all – these kids could well still be alive. Fortunately, Jacob is sufficiently peculiar himself to work out how save his new friends.

VICTOR FRANKENSTEIN

Drama, Horror, Sci-Fi

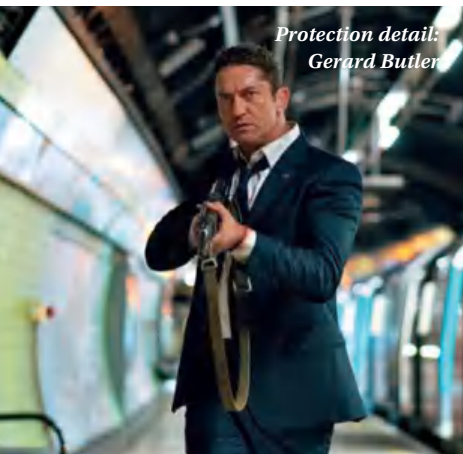
The latest adaptation of Mary Shelley's classic *Frankenstein* (1818) takes more than a few liberties with the original storyline with its intriguing portrayal of the relationship between brilliant monster maker Victor Frankenstein (James McAvoy), and his self-taught medical colleague, Igor Stausman (Daniel Radcliffe).

The story is portrayed from Igor's viewpoint, and follows the pair's scientific exploits that lead them to create life out of death. Ultimately Victor's experiments have horrifying consequences, leaving Igor with the task of saving his friend from his monstrous creation. This film takes a well-known plot and delivers a fresh perspective.



Q: *What do Audrey Hepburn and Whoopi Goldberg have in common?*

They are both EGOTs. That is, they have both won one or more of each of four major US entertainment awards: Emmy, Grammy, Oscar and Tony (EGOT).



*Protection detail:
Gerard Butler*

LONDON HAS FALLEN

Action, Crime, Thriller

It's London, and the leaders of the Western world have gathered for the funeral of the British Prime Minister, who died suddenly under mysterious circumstances. Unsurprisingly, the funeral is the target of a terrorist organisation's plot to devastate the UK capital, kill world leaders and unleash a terrifying vision of the future. Any chance of foiling the attack lies with US President Benjamin Asher (Aaron Eckhart), Secret Service boss Agent Mike Banning (Gerard Butler) and a British M16 agent (Charlotte Riley).



BY THE SEA

Set in the 1970s, Roland (Brad Pitt), an American writer, and his wife Vanessa (Angelina Jolie), a former dancer, travel to a sleepy French seaside town for a holiday. Although their marriage is falling apart, the time they spend with the locals and other travellers, including a newly wed couple, during their stay helps Roland and Vanessa to come to terms with the unresolved issues in their lives. Fans of Brangelina will enjoy seeing the couple together again.

Did You Know...

Metro-Goldwyn-Mayer (MGM) was founded in 1924 by Marcus Loew. Coming from a poor New York family, he left at school at age nine and began working at menial jobs. Eventually, he saved enough money to first purchase a penny arcade in 1903 before moving into theatres and then movies.

■ MGM's famous 'Leo the Lion' opening sequence was the Goldwyn Pictures logo. So far there have been five lions used .

■ The studio's motto is '*Ars gratia artis*' meaning 'Art for art's sake' in Latin. It can be seen on the film scroll around the lion's head in the logo.

■ In the 1930s and '40s the studio boasted that it had 'more stars than there are in heaven' – a reference to the large numbers of A-list movie stars such as Clark Gable, Greta Garbo and Judy Garland under contract.



BOOK DIGEST



While **Bear Grylls's** food guide and cookbook **FUEL FOR LIFE** (Bantam Press) is packed with great nutritional tips and recipes, it's the asides that make it stand out from the rest of the market:

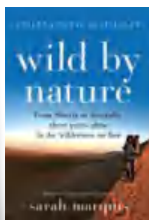
"... I have been known - in extremity - to drink my own urine. Never for fun though - I promise! It has saved lives in survival situations, but only if the pee is fairly pale. If it's dark brown it's a pure waste product and won't help you. It tastes hot, salty and, frankly, pretty terrible - but no-one ever told me survival would be pretty!"





Three years spent walking from Siberia to Australia is recounted in **WILD BY NATURE**, (Allen & Unwin) by **Sarah Marquis**:

"... Suddenly, without seeing him come, there he is, sitting very straight on his horse, looking at me. My very first nomad is right in front of me. I smile, full of respect. With no real expression on his face, he gives a very, very subtle movement of his head and looks at me with the piece of paper in my hand. I say the word for water, *us*, pronounced 'ousse'. He skilfully throws his leg over the saddle, plants his feet on the ground and squats down, lifting his traditional coat as a woman would lift her skirt.



In the dust of the path, he traces a crude map and marks with an X the spot where I'll be able to find water. I thank him a thousand times and use gestures to ask if I can take a picture. He motions for me to wait, swats the flies from his horse's eyes and checks his tunic doesn't have too many wrinkles. Now he's ready."

Wildlife expert and filmmaker **David Ireland** tells of his first time filming a whale while underwater in **THE EXTRAORDINARY LIFE OF THE WILDLIFE MAN** (Penguin):

"... The water went cloudy. I thought I was suffering blurred vision, but the whale was about to give birth! I quietly swam to the bottom ten yards away and turned on the video, filming as she rubbed herself vigorously against the seabed. I was concentrating so intently I didn't notice her reposition her tail above me – she brought it straight down to push off from the seafloor.

In all my years of shooting wildlife, nothing has ever come close to that

pain. The blow completely knocked the air out of me and left me limp. As feeling returned to my body I kicked off weakly and began the long journey to the surface. My field of vision started to narrow, I started to sink. This was it.

Then I felt a gentle pressure at the small of my back. I turned my neck and stared directly into the eye of the whale. She moved behind me. With ever-increasing momentum, I started to approach the surface. She was rescuing me."



In the 19th century, armed bandits called bushrangers terrified those travelling by coach through the Australian bush – and captured the public imagination.

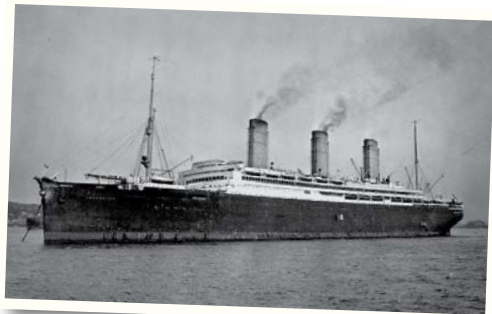
BUSHRANGER TRACKS

by **Gregory Powell** (New Holland) has retraced their steps, recording criminal exploits and the police who pursued them:

"... Dan Morgan had become lost south of the Murray River.

He turned up at Peechelba Station and bailed up the owners, the McPherson family. Now Morgan

sought rest, comfort and companionship after many nights in the bush alone. At gunpoint, the family 'invited' him to dine with them. It would be his last night on Earth."



Freda Marnie Nichols tells the astonishing tale of Ethel, **THE AMAZING MRS LIVESEY** (Allen & Unwin), whose career of serial bigamy and charismatic con-artistry was filled with escapades such as the time she, disguised as Eva Turner, was caught stowing away on a ship:

"... To her horror, they hid the buxom Miss Turner in the dark hold for the two days and night it took to reach Auckland. At last she heard the lock being opened in the solid steel door. There, standing in the doorway, was her captor.

'Ah, Mr McKenzie, so lovely to see you again!' Ethel said, with more gaiety than she felt.

He led her up onto the deck. There stood the Captain, her bag at his feet, two New Zealand police officers next to him. 'This is her,' the Captain said. The officers immediately came up on either side of her, one grabbing her arm roughly. Ethel glared at him and tried to pull herself into a more dignified pose.

'Thank you, Captain,' she said, pulling her shoulders back and lifting her chin. 'It has been an *interesting* cruise. I will NOT be recommending your ship to my friends.'

Behind her, McKenzie gave a short laugh as she was led away.

'What a dame!'"



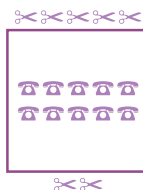
Puzzles

Challenge yourself by solving these puzzles and mind stretchers, then check your answers on page 113.

BY MARCEL DANESI

SECRET SEQUENCE

Among the three choices given, which square is the logical next step in the sequence?



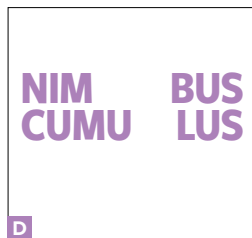
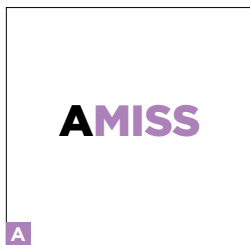
ARITHMERIDDLE

Replace the question marks with mathematical symbols (+, -, × or ÷) to create a correct equation. Symbols can be used more than once or not at all. You must follow the order of operations and include the parentheses below.

$$\{3 \ ? \ 5 \ ? \ 5\} \ ? \ \{12 \ ? \ 3\} \ ? \ 9 = 0$$

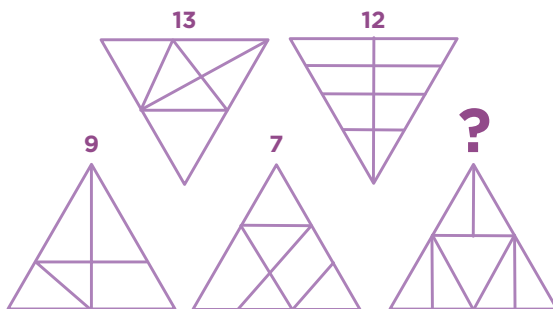
HIDDEN MEANING

Identify the common words or phrases below.



PYRAMID SCHEME

What numeral belongs on the peak of the last triangle?



BRAIN POWER
brought to you by



FRIXION ERASABLE PEN



Trivia

1. Which Gothic architectural feature was designed to support the weight of a cathedral's roof?

2 points

2. Which TV comedy featured, in different episodes, soup, muffin tops, chocolate babka, frozen yoghurt and thirst-making pretzels? 1 point

3. Which statue in St Peter's Basilica in Vatican City was damaged in 1972 by a man wielding a hammer? 2 points

4. Which former UK prime minister worked to improve ice-cream emulsifiers as a food chemist before being elected as an MP? 1 point

5. Does our sun have more of its lifespan behind it or ahead of it? 1 point

6. What's the most common mother tongue in the European Union? 1 point



15. What high-fashion label uses the mythological monster Medusa as its logo? 1 point

7. What type of fruit shares its name with a high-ranking Chinese civil servant? 1 point

8. Thanks to the *X-Men* franchise, which actor has played the same superhero in seven movies? 1 point

9. What does the medical term *dextrocardia* refer to? 2 points

10. Which country's citizens burn effigies of an executed Catholic rebel every November 5? 1 point

11. In which city did the Los Angeles Lakers basketball team originate? 2 points

12. Irish theatre critic Vivian Mercier described which Samuel Beckett work as "a play in which nothing happens, twice"? 2 points

13. In astronomy, what is the opposite of the zenith? 1 point

14. Sofia is the capital of what country? 1 point

16-20 Gold medal

11-15 Silver medal

6-10 Bronze medal

0-5 Wooden spoon

ANSWERS: 1. The flying buttress. 2. *Seinfeld*. 3. *Pietà*, by Michelangelo. 4. Margaret Thatcher. 5. Ahead of it. It's about 4.5 billion years old and has another 5 billion to go before it's expected to become a red giant and then a white dwarf. 6. German. 7. Mandarin. 8. Hugh Jackman, as Wolverine. 9. A condition in which the heart is on the right side of the body. 10. The United Kingdom. The effigies portray Guy Fawkes. 11. Minneapolis. Minnesota, US, named after the state's many lakes. 12. *Waiting for Godot*. 13. The nadir. 14. Bulgaria. 15. Versace.

IT PAYS TO INCREASE YOUR

Word Power

Almost Genius

University students preparing for entrance exams often need to improve their vocabulary. We've been saving up these words – from the Princeton Review's Word Smart: Genius Edition test-preparation guide – for our Word Power masterminds. Turn the page for answers.

BY EMILY COX & HENRY RATHVON

1. **umbrage** *n.* – A: offence given or taken. B: bright sunshine. C: utter confusion.
2. **sobriquet** *n.* – A: nickname. B: tight bandage. C: barbecue coal.
3. **feckless** *adj.* – A: bold and daring. B: of clear complexion. C: weak and ineffective.
4. **bailiwick** *n.* – A: area of interest. B: holiday candle. C: dugout canoe.
5. **onus** *n.* – A: proof of residency or status. B: burden. C: unique entity.
6. **ductile** *adj.* – A: of plumbing. B: easily shaped or influenced. C: hard to locate or define.
7. **troglodyte** *n.* – A: cave dweller or reclusive person. B: bird of prey. C: know-it-all.
8. **paean** *n.* – A: fervent prayer. B: lowly worker. C: song of praise.
9. **sangfroid** *n.* – A: snooty attitude. B: coolness under pressure. C: French chef.
10. **redoubtable** *adj.* – A: open to debate. B: famous. C: formidable.
11. **imprecate** *v.* – A: accuse. B: to curse, swear. C: pester or distract.
12. **modicum** *n.* – A: small portion. B: middle path. C: daily dosage.
13. **apocryphal** *adj.* – A: defiant. B: unsightly. C: of doubtful authorship or authenticity.
14. **somnambulist** *n.* – A: sleepwalker. B: hypnotist. C: historian.
15. **restive** *adj.* – A: comfortable. B: leftover. C: restless.
16. **anomie** *n.* – A: arch foe. B: mutual attraction. C: social instability.

Answers

1. **umbrage** – [A] offence given or taken. Why did your team take such umbrage at being called the underdogs?
2. **sobriquet** – [A] nickname. Say, Paul, how did you get the sobriquet Grumpy?
3. **feckless** – [C] weak and ineffective. Deserted halfway up the cliff, Gail cursed her feckless climbing partner.
4. **bailiwick** – [A] area of interest. “Ask me anything about grammar,” the curmudgeonly chief subeditor said. “That’s my bailiwick.”
5. **onus** – [B] burden. “The onus,” Mr Peters barked, “is on your boys to fix my broken window.”
6. **ductile** – [B] easily shaped or influenced. Decisive? No. Tara’s opinions are sometimes as ductile as Play-Doh.
7. **troglydite** – [A] cave dweller or reclusive person. I wouldn’t go so far as to call Jerry a troglodyte, but he’s definitely on the shy side.
8. **paean** – [C] song of praise. Let us raise a toast and a rousing paean to Jay and Cathy’s wedding!
9. **sangfroid** – [B] coolness under pressure. With unrelenting sangfroid,

Andrea remained a pro at the poker table despite the high stakes.

10. **redoubtable** – [C] formidable. The boxer was no match for his redoubtable competitor.
11. **imprecate** – [B] to curse, swear. Before being banished, the witch threatened to imprecate the town for five generations.

A STROKE OF ...

Genius originally meant ‘guardian spirit’, from the Latin *gignere* (to beget, to produce). It’s related to the words *genus*, *gender*, *generation* and even *kin* – all suggestive of birth. The modern meaning – a person endowed with exceptional ability or talent – comes from Milton’s political tract *Eikonoklastes* (1649).

12. **modicum** – [A] small portion. All I ask is a modicum of cooperation with the housework.

13. **apocryphal** – [C] of doubtful authorship or authenticity. Jenny’s tales of astronaut training were wholly apocryphal.

14. **somnambulist** – [A] sleepwalker. For a somnambulist,

Lady Macbeth is rather talkative.

15. **restive** – [C] restless. Peter got so restive during the exam, he chewed his pencil almost to the lead.
16. **anomie** – [C] social instability. In the ’70s, urban strife and suburban anomie gave rise to school violence.

VOCABULARY RATINGS

- 5 & below:** Summer school for you
6–9: Passing grades
10–12: Your parents will be proud
13–15: Word Power wizard

Reader's digest



Explore, Interact, Inspire

Available now, everywhere



Hurry for this great price!

Reader's digest

HOURS
OF
GREAT
READING

THE BIG ONE

THIS MEGAQUAKE
IS OVERDUE

PAGE 102

The Healing
Power of Hens

PAGE 28

10 Sleep Myths
Debunked

PAGE 15

Child Labour
Tobacco's Shame

PAGE 54

Smart Animals 8
All in a Day's Work 96
Word Power 125

Don't miss
out. Each issue
packed with
real-life drama,
laughs and
inspiring stories

Save

50%
OFF RETAIL

For more details, head to:

ASIA: rdasia.com/subscribe

AUSTRALIA: readersdigest.com.au/subscribe

NEW ZEALAND: readersdigest.co.nz/subscribe